

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

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**PETITION TO WITHDRAW A HOLDING OF ABANDONMENT PURSUANT  
TO 37 C.F.R. § 1.181(a)**

Mail Stop Petition  
Commissioner for Patents  
Office of Initial Patent Examination  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to a Notice of Abandonment, mailed August 14, 2007, for allegedly failing to timely file a proper reply to the Office action of August 7, 2006, Applicant hereby submits this petition requesting reconsideration of the holding of abandonment pursuant to 37 C.F.R. § 1.181(a). Since this is a petition pursuant to 37 C.F.R. § 1.181(a), no petition fee is required.

### Facts and Points to be Reviewed

1. The above-noted Office action of August 7, 2006, in addition to including various claim rejections, indicated that the instant reissue application was filed with a defective oath/declaration. Specifically, the Office action stated that the as-filed oath/declaration does not include the statement, as required by 37 C.F.R. § 1.175, that the errors arose without deceptive intent.

2. A complete and timely response to the Office action of August 7, 2006 was filed in the U.S. Patent and Trademark Office (“USPTO”) via facsimile on November 7, 2006. This response addressed each and every ground of rejection and objection as required by 37 C.F.R. § 1.111. In addition, as a showing of good faith, Applicants’ representative included an unsigned copy of an oath/declaration that is fully compliant with 37 C.F.R. § 1.175. Applicants’ representative further indicated that a signed oath/declaration would soon follow. A copy of this reply is attached hereto as Exhibit A.

3. After the response of November 7, 2006 was filed, the USPTO mailed three Notice of Non-Compliant Amendment papers, consecutively dated December 4, 2006, February 20, 2007, and March 19, 2007. A copy of each of these papers is attached hereto as Exhibit B, Exhibit C, and Exhibit D, respectively. None of these papers indicated that Applicants’ response of November 7, 2006 was non-compliant because the submitted oath/declaration was unsigned. Furthermore, as will be explained further below, none of these papers was required to include such an indication.

4. Applicants’ representative filed complete and timely responses to each of the above-noted papers on January 3, 2007, March 6, 2007, and April 19, 2007, respectively. Though not required, a copy of the fully-signed compliant oath/declaration accompanied the response that was filed on March 6, 2007. A copy of each of these responses is attached hereto as Exhibit E, Exhibit F, and Exhibit G, respectively.

5. On August 14, 2007, the USPTO mailed Applicants the Notice of Abandonment. The Notice of Abandonment alleges that the response of November 7, 2006, which was filed in response to the Office action of August 7, 2006, was incomplete because it included only the unsigned oath/declaration, rather than a signed oath/declaration. The Notice of Abandonment further alleges that the inclusion of unsigned oath/declaration in the response of November 7, 2006 was a “deliberate omission,” and therefore the provisions of 37 C.F.R. 1.135(c) do not apply. A copy of the Notice of Abandonment is attached hereto as Exhibit H.

6. Section 1444 of the Manual of Patent Examining Procedure (M.P.E.P.), which addresses the submission of an unsigned reissue oath/declaration, states the following:

If the unsigned reissue oath/declaration is submitted as part of a reply which is otherwise properly signed and responsive to the outstanding Office action, the reply should be accepted by the examiner as proper and responsive, and the oath/declaration considered fully in the next Office action. The reply should not be treated as an unsigned or improperly signed amendment (see MPEP § 714.01(a)), nor do the holdings of *Ex parte Quayle* apply in this situation. The lack of signature, along with any other oath/declaration deficiencies, should be noted in the next Office action rejecting the claims as being based upon an insufficient reissue oath/declaration. (emphasis added)

7. Applicants’ representative submits that the Examiner’s decision to issue the Notice of Abandonment runs contrary to Section 1444 of the M.P.E.P. Indeed, as noted above, this section of the M.P.E.P. clearly and unambiguously instructs the Examiner to accept, as proper, a reply that includes an unsigned oath/declaration.

8. Applicants’ representative further submits that the Examiner, rather than arbitrarily and capriciously mailing out the Notice of Abandonment, should have simply noted the presence of the unsigned oath/declaration in the next Office action on the merits and once again rejected the claims as being based on an insufficient oath/declaration. The Examiner’s failure to do so runs directly contrary to the M.P.E.P.

Action Requested

In view of the foregoing, Applicants request reconsideration and withdrawal of the holding of abandonment.

If for some reason Applicants do owe a fee for this petition, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: September 14, 2007

By: /PAUL D. AMROZOWICZ, REG. NO. 45264/  
Paul D. Amrozowicz  
(480) 385-5060



## **EXHIBIT A**

## Auto-Reply Facsimile Transmission



TO:

Fax Sender at 4803855061

Fax Information

Date Received:

11/7/2006 5:27:30 PM [Eastern Standard Time]

Total Pages:

17 (including cover page)

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Received  
Cover  
Page  
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Nov. 7. 2006 3:16PM INGRASSIA FISHER & LORENZ PC		No. 4661 P. 1	
<b>INGRASSIA FISHER &amp; LORENZ, P.C.</b> 7150 E. CAMELBACK, SUITE 325 SCOTTSDALE, ARIZONA 85251 Telephone: (480) 385-5060 Facsimile: (480) 385-5061			
FACSIMILE TRANSMITTAL SHEET			
TO:	FROM:		
Examiner D. P. Turocy	David K. Benson, Reg. No. 42,314		
COMPANY:	DATE:		
USPTO	NOVEMBER 7, 2006		
FACSIMILE NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:		
571-273-8300	17		
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:		
571-272-2940	246-99-029RE 1246		
RE:	RECIPIENT'S REFERENCE NUMBER:		
Response	10/754,921		
URGENT    FOR REVIEW    PLEASE COMMENT    PLEASE REPLY    PLEASE RECYCLE			
NOTES/COMMENTS			
<b>FORMAL COMMUNICATION INTENDED FOR ENTRY</b>			
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PAGE 1/17 * RCVD AT 11/7/2006 5:27:30 PM [Eastern Standard Time] * SVR:USPTO-EFAXF-3/10 * DNS:2738300 * CSID:4803855061 * DURATION (mm:ss):04:26			

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Examiner D. P. Turocy	DKB  David K. Benson, Reg. No. 42,314
COMPANY:	DATE:
USPTO	NOVEMBER 7, 2006
FACSIMILE NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
571-273-8300	17
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
571-272-2940	246-99-029RE 1246
RE:	RECIPIENTS REFERENCE NUMBER:
Response	10/754,921

URGENT

FOR REVIEW

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appl. No. : 10/754,921 Confirmation No. 7604  
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Docket No. : 246-99-029RE 1246

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**Certificate of Transmission**

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300

on Nov. 7, 2006 (Date).  
by Signature [Signature]

**RESPONSE AND AMENDMENT PURSUANT TO 37 C.F.R. § 1.111**

BOX AMENDMENT  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the non-final Office Action mailed on August 7, 2006, please amend the above-identified application as set forth below.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.

Amendments to the Claims:

1. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

depositing a first layer of parylene N on a clean surface portion of the polymeric substrate;

depositing a second layer of parylene C over said first layer; and

annealing by heat each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the parylene C layer on the substrate and its barrier properties.

2. (original) The method of claim 1, wherein the annealing temperature is from about 80 to 220° C and the time period is from about 12 to 100 hours.

3. (original) The method of claim 2, wherein the annealing temperature is about 120 ° C and the time period is about 48 hours.

4. (original) The method of claim 1, wherein the first layer of parylene N has a thickness in the range of from about 0.0001" to 0.0005", and the second layer of parylene C has a thickness in the range from about 0.0002" to 0.002".

5. (original) The method of claim 4, wherein the first layer of parylene N is about 0.00002" thick and the second layer of parylene C is about 0.0005" thick.

6. (original) The method of claim 1, further comprising the step of shifting gradually the deposition of parylene N to parylene C on the substrate to form a graded interlayer of parylene N and parylene C between the first and second layers.

7. (original) The method of claim 6, wherein the graded interlayer includes a thickness in the range of from about 0.00005" to 0.0005".

8. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

treating a surface portion of the polymeric substrate to remove any contaminants, said treating step comprising:

cleaning ultrasonically the substrate in a solution of detergent,

rinsing the substrate in deionized water,

rinsing the substrate in methanol,

drying the substrate in an oven at a temperature of about 80° C for at least one hour, and

blowing off the substrate with deionized nitrogen gas;

depositing at least one layer of a parylene polymer on the surface of the polymeric substrate via chemical vapor deposition; and

annealing by heat each deposited layer of the parylene polymer in the presence of a vacuum at an annealing temperature for a time sufficient to increase the degree of parylene crystallization.

9. (original) The method of claim 8, wherein said depositing step comprises depositing a first layer of parylene N on the surface of said substrate and a second layer of parylene C over said first layer of parylene N.

10. (original) The method of claim 8, wherein said depositing step further comprises gradually shifting the deposition of parylene N to parylene C so as to form a graded interlayer of parylene N and parylene C between the first and second layers.

11. (currently amended) A method for depositing a barrier coating on a clean elastomeric surface, the method comprising the steps of:

exposing the surface to parylene N in vapor phase to form a first layer of parylene N polymer;

shifting the exposure of said parylene N to parylene C in vapor phase upon reaching a desired thickness of the first layer to form a graded layer comprising a transitional mixture ~~or~~ of parylene N and parylene C; and

exposing the ~~elastomeric surface~~ graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on said graded ~~interlayer~~.

12. (original) The method of claim 11, further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum; and maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of parylene crystallization and to improve the adherence capability of the parylene layers to the elastomeric surface.

13. (currently amended) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer, the second parylene polymer being parylene C; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

14. (canceled).

15. (currently amended) The method of claim 13 further comprising ~~causing~~ forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

16. (currently amended) A method for depositing a barrier ~~coating~~ coating on a surface to protect an underlying substrate, the method comprising the steps of:



exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer,

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being parylene C and also being a different parylene polymer than said first parylene polymer, and

exposing said ~~graded~~ transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said ~~graded~~ transition layer.

17. (original) The method of claim 16 wherein said transition layer is a graded layer of said first and second parylene polymers.

18. (canceled).

19. (currently amended) The method of claim 18 further comprising ~~causing~~ forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

20. (original) The method of claim 16 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

21. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate, the first parylene polymer being parylene N;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

21. (new) The method of claim 21 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

22. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, the first parylene polymer being parylene N;

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

23. (new) The method of claim 22 wherein said transition layer is a graded layer of said first and second parylene polymers.

24. (new) The method of claim 22 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

25. (new) The method of claim 22 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

## REMARKS/ARGUMENTS

### A. Summary of the Amendment

This is a full and timely response to the non-final Office Action dated August 7, 2006. Reexamination and reconsideration are courteously requested. By way of the present amendment, claims 13, 15 to 16, and 19 are amended. Furthermore, claims 14 and 18 are canceled, and claims 21 to 25 are newly added. Thus, claims 1 to 25 remain pending for the Examiner's consideration, with claims 1, 8, 11, 13, 16, 21, and 23 being independent claims.

### B. Defective Oath/Declaration

The Oath/Declaration filed with this Reissue Application is allegedly defective for not stating that all errors being corrected in this application arose without any deceptive intent on the part of Applicant. Further, claims 1 to 20 are rejected as being based on a defective reissue oath. An unsigned substitute oath/declaration is filed herewith, including all appropriate language for compliance with 37 C.F.R. § 1.175, and will be executed and filed shortly hereafter.

### C. Information Disclosure Statement (IDS)

It is acknowledged that the only cited reference, U.S. Patent No. 6,140,456 (Lee), on the IDS citation sheet filed 3/3/2005 is cited by the Examiner in the Office Action and the PTO-892 form attached thereto. Thus, it is not believed to be necessary for Applicant to resubmit the 3/3/2005 IDS.

D. Allowable Subject Matter

The examiner has acknowledged that claims 8 to 10 are directed to allowable subject matter. Applicants thank the Examiner for a thorough examination of these claims.

E. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 16 to 20 are rejected as being indefinite for lack of antecedent basis for the term "said graded layer." The present amendment overcomes this rejection by changing the term "graded" to "transition."

F. Rejections Under 35 U.S.C. § 102(b)

Claims 16 to 17 are rejected as being anticipated by Lee. These rejections are respectfully traversed. By way of the present amendment, claim 16 (and claim 17 by way of its dependency from claim 16) is amended to recite a method for depositing a barrier coating on a surface to protect an underlying *elastic polymeric* substrate. According to the method, a surface of the elastic polymeric substrate is exposed to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, and then a subsequent transition layer and a third layer of a second parylene polymer are formed over the first parylene polymer in order to further protect the elastic polymeric substrate. In contrast, Lee is directed to building thin films on semiconductor substrates such as SiO<sub>2</sub>. Nowhere does Lee teach or suggest that parylene polymers, and particularly the multi-layered parylene polymers of the present invention, could or should be formed on elastic polymeric substrates for their protection. For at least this reason, the rejections under 35 U.S.C. § 102(b) should be withdrawn.

G. Rejections Under 35 U.S.C. § 103(a)

Claims 1 to 7, and 11 to 20 are rejected as being unpatentable over U.S. Patent No. 5879808 (Wary) in view of U.S. Patent No. 5075174 (Pyle), JP 04-173848 (JP-848) and Lee. These rejections are respectfully traversed.

Regarding claims 1 to 7, independent claim 1 recites depositing a first layer of parylene N on a clean surface portion of a polymeric substrate, and then depositing a second layer of parylene C over the first layer. In the Office Action, it is conceded that Wary, Pyle, and JP-848 fail to teach or suggest depositing a plurality of different parylene materials in a layered fashion. For this purpose, Lee is cited for disclosing a method by which different parylene materials are deposited in layers (col. 22, line 60 to col. 23, line 17). However, nowhere in Lee is there any discussion of depositing parylene N directly on a clean polymer substrate surface, and then depositing parylene C over the parylene N.

In view of the deficiency of Lee to disclose the deposition of specific parylene materials in the particular order recited in claim 1, a person of skill in the pertinent art would not be motivated to reach the present invention absent some complementary teaching from what is known in the art. However, Pyle is the only cited reference that makes any mention of different types of parylene materials such as parylene N and parylene C (col. 2, lines 24 to 49). Yet like Lee, Pyle fails to discuss any usefulness produced from using any of these particular parylene materials in any particular layered fashion. Pyle does not disclose any particular usefulness for any one class of parylene materials (N, D, or C) over another class of parylene materials. Indeed, none of the other prior art references provide motivation for selecting parylene N as a substrate-contacting layer, or for selecting parylene C as an outer layer. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit a first layer of parylene N on a clean surface portion of a polymeric substrate, and then deposit a second layer of parylene C over the first layer. For at least this reason, the rejection of claims 1 to 7 should be withdrawn.

Regarding claims 11 to 12, independent claim 11 recites exposing a surface to parylene N in vapor phase to form a first layer of parylene N polymer, shifting the exposure of the

pyrlene N to pyrlene C in vapor phase to form a graded layer comprising a transitional mixture of pyrlene N and pyrlene C, and then exposing the graded layer to pyrlene C in vapor form in the absence of pyrlene N to form a third layer of pyrlene C polymer on the graded layer. As previously discussed, none of the cited prior art teaches or suggests using any of these particular pyrlene materials in any particular layered fashion. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit the pyrlene N and C layers and graded layer as recited in claim 11. For at least this reason, the rejection of claims 11 to 12 should be withdrawn.

Regarding claims 13 to 25, each of independent claims 13 and 16 recites that pyrlene C is selected as a second or outer layer, and each of independent claims 21 and 23 recites that pyrlene N is selected as a first or inner layer formed directly on a substrate. The reason for this deposition order is because, as taught in the present specification, the present inventors discovered that pyrlene N has particularly high bonding properties, and pyrlene C has particularly high chemical resistance properties. As previously discussed, nowhere in the cited prior art is there any teaching or suggestion that would motivate a person of ordinary skill in the art to select pyrlene N over other parylenes as an inner bonding layer, or to select pyrlene C over other parylenes as an outer layer for chemical resistance. For at least these reasons, the rejections of claims 13 to 20 should be withdrawn, and newly added claims 21 to 25 should be allowed.

#### H. Conclusion

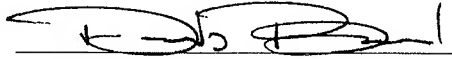
In view of Applicant's amendments and remarks, it is respectfully submitted that Examiner's objections and rejections have been overcome. Accordingly, Applicants respectfully submit that the application is now in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants attorneys at the below-listed telephone number.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: Nov. 7, 2006

By:   
David K. Benson  
Reg. No. 42,314  
(480) 385-5060



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REISSUE APPLICATION:	246-99-029RE 1246
ORIGINAL U.S. PATENT NO.:	6,586,048
GRANTED:	July 1, 2003
PATENTEES:	Ronald F. Welch, Jr. Robert J. Saccomanno Gary A. West
TITLE OF PATENT:	Method for Depositing a Barrier Coating on a Polymeric Substrate and Composition Comprising Said Barrier Coating

**SUBSTITUTE REISSUE OATH/DECLARATION AND POWER OF ATTORNEY BY  
INVENTORS**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names.

We believe we are the original, first and sole inventors of the subject matter which is described and claimed in original U.S. patent 6,586,948, granted July 1, 2003, and in the accompanying Reissue Application and for which invention we solicit a reissue patent.

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a). In compliance with this duty there is attached hereto an Information Disclosure Statement.

**STATEMENT OF INOPERATIVENESS OR INVALIDITY  
OF ORIGINAL PATENT  
37 C.F.R 1.175**

We believe the original patent (U.S. patent 6,586,048) to be partly inoperative because the patent claims embrace less than we had a right to claim, by being too narrow in at least some respects and thus erroneously fail to protect all important aspects of the invention disclosed in patent 6,586,048.

We recently became aware of this error when companion applications were being reviewed with respect to prosecution both before the US Patent and Trademark Office and before the International Examining Authority (PCT). Specifically, this error arose in our unduly limiting our method Invention to specific types of parylene polymers. All errors being corrected in the reissue application, up to the filing of this oath or declaration, arose without any deceptive intention on our part.

We understand that the new claims in this reissue application are broadened in certain aspects to correct such inoperativeness, while maintaining the original claims without change so as to obtain the scope of the new broadened claims while retaining the scope of the original claims

We hereby declare that all statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issued thereon.

We hereby appoint all practitioners associated with Customer Number 00128 and Mr. James W. Falk, Reg. 16,154, as our attorneys to prosecute the application identified above and to transact all business in the United States Patent and Trademark Office connected herewith.

It is respectfully requested that all written communications from the Patent and Trademark Office in connection with this application be addressed to

Honeywell International Inc.  
Law Dept. AB1  
P. O. Box 2245  
Morristown, New Jersey 07962

Full name of first joint inventor: **Ronald F. Welch, Jr.**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Oakridge Citizenship: U.S.

Post Office Address: 558 Gardner Road  
Horseheads, New York 14845-1860

Full name of second joint inventor: **Robert J. Saccomanno**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Montville, New Jersey Citizenship: U.S.

Post Office Address: 22 Glenwood Drive  
Montville, New Jersey 07045

Full name of third joint inventor: **Gary A. West**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: \_\_\_\_\_ Citizenship: U.S.

Post Office Address: 336 Brownsdale Road  
Butler, Pennsylvania 16002-0424

## **EXHIBIT B**



UNITED STATES PATENT AND TRADEMARK OFFICE

*Amen*

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,921	01/09/2004	Ronald F. Welch JR.	246-99-029RE 1246	7604

7590 12/04/2006

James W Falk  
Honeywell International Inc  
Law Dept AB1  
PO Box 2245  
Morristown, NJ 07962

EXAMINER

TUROC, DAVID P

ART UNIT

PAPER NUMBER

1762

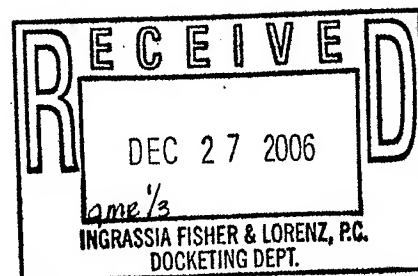
DATE MAILED: 12/04/2006

*ITL*

*Response 1/4/07*

Please find below and/or attached an Office communication concerning this application or proceeding.

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LAW DEPARTMENT  
2006 DEC -8 P 3:13  
CENTRAL RECORDS - MTO



*Q12/11/06*

**Notice of Non-Compliant  
Amendment (37 CFR 1.121)**

Application No.

10/754,921

Examiner

David Turocy

Applicant(s)

WELCH ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 07 November 2006 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☒ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: See Continuation Sheet.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):  
\_\_\_\_\_

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

**TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:**

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Telephone No.

Continuation of 4(e) Other: The amendments do not conform with the reissue guidelines as set forth in the 37 CFR 1.174 see also MPEP 1400. MPEP 1453 (D) state An amendment of a "new claim" (i.e., a claim not found in the patent, that was previously presented in the reissue application) must be done by presenting the amended "new claim" containing the amendatory material, and completely underlining the claim. The presentation cannot contain any bracketing or other indication of what was in the previous version of the claim. This is because all changes in the reissue are made vis- à-vis the original patent and not in comparison to the prior amendment. Although the presentation of the amended claim does not contain any indication of what is changed from the previous version of the claim, applicant must point out what is changed in the "Remarks" portion of the amendment. Also, per 37 CFR 1.173(c), each change made in the claim must be accompanied by an explanation of the support in the disclosure of the patent for the change. The examiner notes there are two claim 21's.



TIMOTHY MEEKS  
SUPERVISORY PATENT EXAMINER

## **EXHIBIT C**





## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,921	01/09/2004	Ronald F. Welch JR.	246-99-029RE 1246	7604
7590 02/20/2007				
James W Falk Honeywell International Inc Law Dept AB1 PO Box 2245 Morristown, NJ 07962		EXAMINER TUROCY, DAVID P		
		ART UNIT PAPER NUMBER		
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
30 DAYS		02/20/2007	PAPER	

*Notice of non compliant amendment  
Response Due 3/20/07*

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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U.S. DEPARTMENT OF  
COMMERCE  
MAR 22 P 3:11  
CENTRAL RECORDS - MTO

RECEIVED	
002.2163(R)	
MAR 7 2007	
03/7	
INGRASSIA FISHER & LORENZ, P.C. DOCKETING DEPT.	

*20 2/24/07*

**Notice of Non-Compliant  
Amendment (37 CFR 1.121)**

Application No.

10/754,921

Examiner

David Turocy

Applicant(s)

WELCH ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 03 January 2007 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: See Detailed Action.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):  
\_\_\_\_\_

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

**TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:**

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Telephone No.

## DETAILED ACTION

### *Response to Amendment*

The amendments do not conform with the reissue guidelines as set forth in the 37 CfR 1.174 see also MPEP 1400. MPEP 1453 (D) states: *An amendment of a "new claim" (i.e., a claim not found in the patent, that was previously presented in the reissue application) must be done by presenting the amended "new claim" containing the amendatory material, and completely underlining the claim. The presentation cannot contain any bracketing or other indication of what was in the previous version of the claim. This is because all changes in the reissue are made vis- à-vis the original patent and not in comparison to the prior amendment. Although the presentation of the amended claim does not contain any indication of what is changed from the previous version of the claim, applicant must point out what is changed in the "Remarks" portion of the amendment. Also, per 37 CFR 1.173(c), each change made in the claim must be accompanied by an explanation of the support in the disclosure of the patent for the change.*

Therefore, to conform with the MPEP, any claim that is not in the patent (whether presented earlier or whether presented as a new claim not presented previously in the reissue), must be completely underlined, and presented as a new claim. Then the applicant must point out the changes in the remarks portion of the amendment and explain the support in the disclosure of the patent for the change.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\*

  
TIMOTHY MEEKS  
SUPERVISORY PATENT EXAMINER

## **EXHIBIT D**



## UNITED STATES PATENT AND TRADEMARK OFFICE

*K. Lutter*  
*J. Larsen*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

RECEIVED MAR 30 2007

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,921	01/09/2004	Ronald F. Welch JR.	246-99-029RE 1246	7604
7590 03/19/2007				
James W Falk Honeywell International Inc Law Dept AB1 PO Box 2245 Morristown, NJ 07962			EXAMINER TUROCY, DAVID P	
			ART UNIT	PAPER NUMBER
				1762
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
30 DAYS		03/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

*4/4/07*  
*mailed to IFH*

RECEIVED  
LAW DEPARTMENT  
2007 MAR 22 10 48  
CENTRAL RECORDS - M12

RECEIVED	
002-2163 R	
APR 6 2007	
INGRASSIA FISHER & LORENZ, P.C. DOCKETING DEPT.	

*bc 3/23/07*

# Notice of Non-Compliant Amendment (37 CFR 1.121)

Application No.

10/754,921

Examiner

David Turocy

Applicant(s)

WELCH ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 06 March 2007 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

## THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other \_\_\_\_\_.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other \_\_\_\_\_.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other \_\_\_\_\_.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: See Detailed Action.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):  
\_\_\_\_\_

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

## TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

**Extensions of time** are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

**Failure to timely respond** to this notice will result in:

**Abandonment** of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or

**Non-entry** of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Telephone No.

## DETAILED ACTION

### *Response to Amendment*

The amendments do not conform with the reissue guidelines as set forth in the 37 CF R 1.174 see also MPEP 1400. MPEP 1453 states

(2) *Claims*. An amendment paper must include the entire text of each claim being changed by such amendment paper and of each claim being added by such amendment paper. For any claim changed by the amendment paper, a parenthetical expression "amended," "twice amended," *etc.*, should follow the claim number. Each changed patent claim and each added claim must include markings pursuant to paragraph (d) of this section, except that a patent claim or added claim should be canceled by a statement canceling the claim without presentation of the text of the claim.

(c) *Status of claims and support for claim changes*. Whenever there is an amendment to the claims pursuant to paragraph (b) of this section, there must also be supplied, on pages separate from the pages containing the changes, the status (*i.e.*, pending or canceled), as of the date of the amendment, of all patent claims and of all added claims, and an explanation of the support in the disclosure of the patent for the changes made to the claims.

(d) *Changes shown by markings*. Any changes relative to the patent being reissued which are made to the specification, including the claims, upon filing, or by an amendment paper in the reissue application, must include the following markings:

(1) The matter to be omitted by reissue must be enclosed in brackets; and

(2) The matter to be added by reissue must be underlined, except for amendments submitted on compact discs ( §§ 1.96 and 1.821(c)). Matter added by reissue on compact discs must be preceded with "<U>" and end with "</U>" to properly identify the material being added.

(e) *Numbering of patent claims preserved*. Patent claims may not be renumbered. The numbering of any claim added in the reissue application must follow the number of the highest numbered patent claim.



## II. THE CLAIMS

37 CFR 1.173(b)(2) relates to the manner of making amendments to the claims in reissue applications. It is not to be used for making amendments to the remainder of the specification or to the drawings. 37 CFR 1.173(b)(2) requires that:

(A) For each claim that is being amended *by the amendment being submitted* (the current amendment), the entire text of the claim must be presented with markings as defined above;

(B) For each new claim added to the reissue *by the amendment being submitted* (the current amendment), the entire text of the added claim must be presented completely underlined;

(C) A patent claim should be canceled by a direction to cancel that claim, there is no need to present the patent claim surrounded by brackets; and

(D) A new claim (previously added in the reissue) should be canceled by a direction to cancel that claim.

Original patent claims are never to be renumbered; see 37 CFR 1.173(e). A patent claim retains its number even if it is canceled in the reissue proceeding, and the numbering of any added claims must begin after the last original patent claim.

Pursuant to 37 CFR 1.173(c), each amendment submitted must set forth the status of all patent claims and all added claims as of the date of the submission. The status to be set forth is whether the claim is pending or canceled. The failure to submit the claim status will generally result in a notification to applicant that the amendment *prior to final rejection* is not completely responsive (see 37 CFR 1.135(c)). Such an amendment *after final rejection* will not be entered.

Also pursuant to 37 CFR 1.173(c), each claim amendment must be accompanied by an explanation of the support in the disclosure of the patent for the amendment (i.e., support for all changes made in the claim(s), whether insertions or deletions). The failure to submit an explanation will generally result in a notification to applicant that the amendment *prior to final rejection* is not completely responsive (see 37 CFR 1.135(c)). Such an amendment *after final rejection* will not be entered.

Therefore, to conform to the MPEP, any claim that is in the patent (i.e. in this case 11 and 12) must retain the claim number and marked according to the changes shown by markings section above (underlining and bracketing, note that it does not

Art Unit: 1762

include strike through). Original patent claims are never to be renumbers (37 CFR 1.173(e)). A patent retains its number even if it is canceled in the reissue processing, and the number of any added claims must begin after the last original patent claims. In this instance claims 11 and 12 appear in the patent and therefore the claims must retain their number and any added claims must start with 13. If the applicant desires to cancel the claims 11 and 12, the applicant must present the entire text of the claims and thereafter direct in the remarks for the claims to be cancelled. Therefore any new claims should always start with the number subsequent to the last claim numbered in the patent.

The applicant is advised to review MPEP 1453 V. Examples of Proper Amendments, which discusses amendment to claims and discloses examples of methods that conform the MPEP.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

\*\*\*



**TIMOTHY MEEKS**  
**SUPERVISORY PATENT EXAMINER**

## **EXHIBIT E**

## Auto-Reply Facsimile Transmission



TO:

Fax Sender at 4803855061

Fax Information

Date Received:

1/3/2007 3:35:30 PM [Eastern Standard Time]

Total Pages:

14 (including cover page)

**ADVISORY:** This is an automatically generated return receipt confirmation of the facsimile transmission received by the Office. Please check to make sure that the number of pages listed as received in Total Pages above matches what was intended to be sent. Applicants are advised to retain this receipt in the unlikely event that proof of this facsimile transmission is necessary. Applicants are also advised to use the certificate of facsimile transmission procedures set forth in 37 CFR 1.8(a) and (b), 37 CFR 1.6(f). Trademark Applicants, also see the Trademark Manual of Examining Procedure (TMEP) section 306 et seq.

Received  
Cover  
Page

=====>

Jan. 3, 2007 11:23 AM INGRASSIA FISHER & LORENZ PC		No. 6259 2, 1	
<b>INGRASSIA FISHER &amp; LORENZ, P.C.</b> 7150 E. CAMELBACK, SUITE 325 SCOTTSDALE, ARIZONA 85251 Telephone: (480) 385-5060 Facsimile: (480) 385-5061			
FACSIMILE TRANSMITTAL SHEET			
TO:	FROM:		
Examiner D. P. Turvey	David K. Benson, Reg. No. 42,314		
COMPANY:	DATE:		
USPTO	JANUARY 3, 2007		
FACSIMILE NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER		
571-273-8300	14		
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:		
571-272-2940	246-99-029RI 1246		
RE:	RECIPIENT'S REFERENCE NUMBER:		
Response	10/754,921		
URGENT    FOR REVIEW    PLEASE COMMENT    PLEASE REPLY    PLEASE RECYCLE			
NOTES/COMMENTS:			
<b>FORMAL COMMUNICATION INTENDED FOR ENTRY</b>			
THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED, AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAWS. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE MESSAGE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA U.S. POSTAL SERVICE. THANK YOU.			
PAGE 1/14 * RCVD AT 1/3/2007 3:35:30 PM [Eastern Standard Time] * SVR:USPTO-EFAX-515 * DNS:2738300 * CSID:4803855061 * DURATION (mm:ss):02:00			

# INGRASSIA FISHER & LORENZ, P.C.

7150 E. CAMELBACK, SUITE 325

SCOTTSDALE, ARIZONA 85251

Telephone: (480) 385-5060

Facsimile: (480) 385-5061

## FACSIMILE TRANSMITTAL SHEET

TO: Examiner D. P. Turocy	FROM: David K. Benson, Reg. No. 42,314 <i>DKB</i> <i>R</i>
COMPANY: USPTO	DATE: JANUARY 3, 2007
FACSIMILE NUMBER: 571-273-8300	TOTAL NO. OF PAGES INCLUDING COVER: 14
PHONE NUMBER: 571-272-2940	SENDER'S REFERENCE NUMBER: 246-99-029RE 1246
RE: Response	RECIPIENTS REFERENCE NUMBER: 10/754,921

URGENT

FOR REVIEW

PLEASE COMMENT

PLEASE REPLY

PLEASE RECYCLE

NOTES/COMMENTS:

## FORMAL COMMUNICATION INTENDED FOR ENTRY

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED, AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAWS. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, OR THE EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THE MESSAGE TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN ORIGINAL MESSAGE TO US AT THE ABOVE ADDRESS VIA U.S. POSTAL SERVICE. THANK YOU.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appl. No. : 10/754,921 Confirmation No. 7604  
Applicant : Ronald F. WELCH et al.  
Filed : January 9, 2004  
Art Unit : 1762  
Examiner : D.P. Turocy  
Docket No. : 246-99-029RE 1246

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**RESPONSE AND AMENDMENT PURSUANT TO 37 C.F.R. § 1.111**

BOX AMENDMENT  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the non-final Office Action mailed on August 7, 2006 (and further responsive to the Notice of Non-compliant Amendment mailed on December 4, 2006), please amend the above-identified application as set forth below.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.

Amendments to the Claims:

1. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

depositing a first layer of parylene N on a clean surface portion of the polymeric substrate;

depositing a second layer of parylene C over said first layer; and

annealing by heat each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the parylene C layer on the substrate and its barrier properties.

2. (original) The method of claim 1, wherein the annealing temperature is from about 80 to 220° C and the time period is from about 12 to 100 hours.

3. (original) The method of claim 2, wherein the annealing temperature is about 120 ° C and the time period is about 48 hours.

4. (original) The method of claim 1, wherein the first layer of parylene N has a thickness in the range of from about 0.0001" to 0.0005", and the second layer of parylene C has a thickness in the range from about 0.0002" to 0.002".

5. (original) The method of claim 4, wherein the first layer of parylene N is about 0.00002" thick and the second layer of parylene C is about 0.0005" thick.



6. (original) The method of claim 1, further comprising the step of shifting gradually the deposition of parylene N to parylene C on the substrate to form a graded interlayer of parylene N and parylene C between the first and second layers.

7. (original) The method of claim 6, wherein the graded interlayer includes a thickness in the range of from about 0.00005" to 0.0005".

8. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

treating a surface portion of the polymeric substrate to remove any contaminants, said treating step comprising:

cleaning ultrasonically the substrate in a solution of detergent,

rinsing the substrate in deionized water,

rinsing the substrate in methanol,

drying the substrate in an oven at a temperature of about 80° C for at least one hour, and

blowing off the substrate with deionized nitrogen gas;

depositing at least one layer of a parylene polymer on the surface of the polymeric substrate via chemical vapor deposition; and

annealing by heat each deposited layer of the parylene polymer in the presence of a vacuum at an annealing temperature for a time sufficient to increase the degree of parylene crystallization.

9. (original) The method of claim 8, wherein said depositing step comprises depositing a first layer of parylene N on the surface of said substrate and a second layer of parylene C over said first layer of parylene N.

10. (original) The method of claim 8, wherein said depositing step further comprises gradually shifting the deposition of parylene N to parylene C so as to form a graded interlayer of parylene N and parylene C between the first and second layers.

11. (currently amended) A method for depositing a barrier coating on a clean elastomeric surface, the method comprising the steps of:

exposing the surface to parylene N in vapor phase to form a first layer of parylene N polymer;

shifting the exposure of said parylene N to parylene C in vapor phase upon reaching a desired thickness of the first layer to form a graded layer comprising a transitional mixture [or] of parylene N and parylene C; and

exposing the [elastomeric surface] graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on said graded [inter]layer.

12. (original) The method of claim 11, further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum; and maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of parylene crystallization and to improve the adherence capability of the parylene layers to the elastomeric surface.

13. (currently amended) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer, the second parylene polymer being parylene C; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

14. (canceled).

15. (currently amended) The method of claim 13 further comprising [causing] forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

16. (currently amended) A method for depositing a barrier [coasting] coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer,

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being parylene C and also being a different parylene polymer than said first parylene polymer, and

exposing said [graded] transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said [graded] transition layer.

17. (original) The method of claim 16 wherein said transition layer is a graded layer of said first and second parylene polymers.

18. (canceled).

19. (currently amended) The method of claim 18 further comprising [causing] forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

20. (original) The method of claim 16 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

21. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate, the first parylene polymer being parylene N;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

22. (new) The method of claim 21 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

23. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, the first parylene polymer being parylene N;

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

24. (new) The method of claim 23 wherein said transition layer is a graded layer of said first and second parylene polymers.

25. (new) The method of claim 23 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

26. (new) The method of claim 23 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

## **REMARKS/ARGUMENTS**

### **A. Summary of the Amendment**

This is a full and timely response to the non-final Office Action dated August 7, 2006. Reexamination and reconsideration are courteously requested. By way of the present amendment, claims 13, 15 to 16, and 19 are amended. Furthermore, claims 14 and 18 are canceled, and claims 21 to 26 are newly added. Thus, claims 1 to 26 remain pending for the Examiner's consideration, with claims 1, 8, 11, 13, 16, 21, and 23 being independent claims.

Basis for the amendment may be found in the specification as filed. The only substantive change to the previously-pending claims is found in claim 16, which upon entry of the amendment recites that the second parylene polymer is parylene C and also is a different parylene polymer than the first parylene polymer. Regarding newly-added claims 21 and 23, the only difference between these claims and previously-pending claims 1 and 11, respectively, is the recitation that the first parylene polymer is parylene N, and that the first parylene polymer is different than the second parylene polymer. Basis for these amendments is found at least at col. 4, lines 33 to 37.

### **B. Defective Oath/Declaration**

The Oath/Declaration filed with this Reissue Application is allegedly defective for not stating that all errors being corrected in this application arose without any deceptive intent on the part of Applicant. Further, claims 1 to 20 are rejected as being based on a defective reissue oath. An unsigned substitute oath/declaration is filed herewith, including all appropriate language for compliance with 37 C.F.R. § 1.175, and will be executed and filed shortly hereafter.

C. Information Disclosure Statement (IDS)

It is acknowledged that the only cited reference, U.S. Patent No. 6,140,456 (Lee), on the IDS citation sheet filed 3/3/2005 is cited by the Examiner in the Office Action and the PTO-892 form attached thereto. Thus, it is not believed to be necessary for Applicant to resubmit the 3/3/2005 IDS.

D. Allowable Subject Matter

The examiner has acknowledged that claims 8 to 10 are directed to allowable subject matter. Applicants thank the Examiner for a through examination of these claims.

E. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 16 to 20 are rejected as being indefinite for lack of antecedent basis for the term "said graded layer." The present amendment overcomes this rejection by changing the term "graded" to "transition."

F. Rejections Under 35 U.S.C. § 102(b)

Claims 16 to 17 are rejected as being anticipated by Lee. These rejections are respectfully traversed. By way of the present amendment, claim 16 (and claim 17 by way of its dependency from claim 16) is amended to recite a method for depositing a barrier coating on a surface to protect an underlying *elastic polymeric* substrate. According to the method, a surface of the elastic polymeric substrate is exposed to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, and then a subsequent transition layer and a third layer of a second parylene polymer are formed over the first parylene polymer in order to further protect the elastic polymeric substrate. In contrast, Lee is directed to building thin films on semiconductor substrates such as SiO<sub>2</sub>. Nowhere does Lee teach or suggest that parylene



polymers, and particularly the multi-layered parylene polymers of the present invention, could or should be formed on elastic polymeric substrates for their protection. For at least this reason, the rejections under 35 U.S.C. § 102(b) should be withdrawn.

G. Rejections Under 35 U.S.C. § 103(a)

Claims 1 to 7, and 11 to 20 are rejected as being unpatentable over U.S. Patent No. 5879808 (Wary) in view of U.S. Patent No. 5075174 (Pyle), JP 04-173848 (JP-848) and Lee. These rejections are respectfully traversed.

Regarding claims 1 to 7, independent claim 1 recites depositing a first layer of parylene N on a clean surface portion of a polymeric substrate, and then depositing a second layer of parylene C over the first layer. In the Office Action, it is conceded that Wary, Pyle, and JP-848 fail to teach or suggest depositing a plurality of different parylene materials in a layered fashion. For this purpose, Lee is cited for disclosing a method by which different parylene materials are deposited in layers (col. 22, line 60 to col. 23, line 17). However, nowhere in Lee is there any discussion of depositing parylene N directly on a clean polymer substrate surface, and then depositing parylene C over the parylene N.

In view of the deficiency of Lee to disclose the deposition of specific parylene materials in the particular order recited in claim 1, a person of skill in the pertinent art would not be motivated to reach the present invention absent some complementary teaching from what is known in the art. However, Pyle is the only cited reference that makes any mention of different types of parylene materials such as parylene N and parylene C (col. 2, lines 24 to 49). Yet like Lee, Pyle fails to discuss any usefulness produced from using any of these particular parylene materials in any particular layered fashion. Pyle does not disclose any particular usefulness for any one class of parylene materials (N, D, or C) over another class of parylene materials. Indeed, none of the other prior art references provide motivation for selecting parylene N as a substrate-contacting layer, or for selecting parylene C as an outer layer. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit a first layer of parylene N on a clean surface portion of a polymeric substrate, and then

deposit a second layer of parylene C over the first layer. For at least this reason, the rejection of claims 1 to 7 should be withdrawn.

Regarding claims 11 to 12, independent claim 11 recites exposing a surface to parylene N in vapor phase to form a first layer of parylene N polymer, shifting the exposure of the parylene N to parylene C in vapor phase to form a graded layer comprising a transitional mixture of parylene N and parylene C, and then exposing the graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on the graded layer. As previously discussed, none of the cited prior art teaches or suggests using any of these particular parylene materials in any particular layered fashion. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit the parylene N and C layers and graded layer as recited in claim 11. For at least this reason, the rejection of claims 11 to 12 should be withdrawn.

Regarding claims 13 to 26, each of independent claims 13 and 16 recites that parylene C is selected as a second or outer layer, and each of independent claims 21 and 23 recites that parylene N is selected as a first or inner layer formed directly on a substrate. The reason for this deposition order is because, as taught in the present specification, the present inventors discovered that parylene N has particularly high bonding properties, and parylene C has particularly high chemical resistance properties. As previously discussed, nowhere in the cited prior art is there any teaching or suggestion that would motivate a person of ordinary skill in the art to select parylene N over other parylenes as an inner bonding layer, or to select parylene C over other parylenes as an outer layer for chemical resistance. For at least these reasons, the rejections of claims 13 to 20 should be withdrawn, and newly added claims 21 to 26 should be allowed.

#### H. Conclusion

In view of Applicant's amendments and remarks, it is respectfully submitted that Examiner's objections and rejections have been overcome. Accordingly, Applicants respectfully submit that the application is now in condition for allowance, and such allowance is therefore

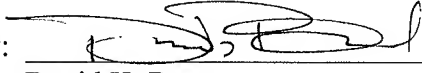
earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants attorneys at the below-listed telephone number.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: Jan 3, 2007

By:   
David K. Benson  
Reg. No. 42,314  
(480) 385-5060

## **EXHIBIT F**

## Electronic Acknowledgement Receipt

EFS ID:	1567511
Application Number:	10754921
International Application Number:	
Confirmation Number:	7604
Title of Invention:	Method for depositing a barrier coating on a polymeric substrate and composition comprising said barrier coating
First Named Inventor/Applicant Name:	Ronald F. Welch
Correspondence Address:	James W Falk Honeywell International Inc Law Dept AB1 PO Box 2245 Morristown NJ 07962 US 201-393-2065 -
Filer:	David K. Benson/Missy Hale
Filer Authorized By:	David K. Benson
Attorney Docket Number:	246-99-029RE 1246
Receipt Date:	06-MAR-2007
Filing Date:	09-JAN-2004
Time Stamp:	16:35:50
Application Type:	Utility

### Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	\$ 200
RAM confirmation Number	583

Deposit Account	502091
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		ResponseAmendment.pdf	480612	yes	13
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Claims		2	8	
	Applicant Arguments/Remarks Made in an Amendment		9	13	
Warnings:					
Information:					
2	Examination support document	Petition.pdf	467148	no	12
Warnings:					
Information:					
3	Oath or Declaration filed	DecSac.pdf	107825	no	3
Warnings:					
Information:					
4	Oath or Declaration filed	DecWest.pdf	166468	no	4
Warnings:					
Information:					
5	Fee Worksheet (PTO-06)	fee-info.pdf	8205	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1230258		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

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**RESPONSE AND AMENDMENT PURSUANT TO 37 C.F.R. § 1.111**

BOX AMENDMENT  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the non-final Office Action mailed on August 7, 2006 (and further responsive to the Notice of Non-compliant Amendment mailed on February 20, 2007), please amend the above-identified application as set forth below.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.



Amendments to the Claims:

1. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

depositing a first layer of parylene N on a clean surface portion of the polymeric substrate;

depositing a second layer of parylene C over said first layer; and

annealing by heat each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the parylene C layer on the substrate and its barrier properties.

2. (original) The method of claim 1, wherein the annealing temperature is from about 80 to 220° C and the time period is from about 12 to 100 hours.

3. (original) The method of claim 2, wherein the annealing temperature is about 120 ° C and the time period is about 48 hours.

4. (original) The method of claim 1, wherein the first layer of parylene N has a thickness in the range of from about 0.0001" to 0.0005", and the second layer of parylene C has a thickness in the range from about 0.0002" to 0.002".

5. (original) The method of claim 4, wherein the first layer of parylene N is about 0.00002" thick and the second layer of parylene C is about 0.0005" thick.

6. (original) The method of claim 1, further comprising the step of shifting gradually the deposition of parylene N to parylene C on the substrate to form a graded interlayer of parylene N and parylene C between the first and second layers.

7. (original) The method of claim 6, wherein the graded interlayer includes a thickness in the range of from about 0.00005" to 0.0005".

8. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

treating a surface portion of the polymeric substrate to remove any contaminants, said treating step comprising:

cleaning ultrasonically the substrate in a solution of detergent,

rinsing the substrate in deionized water,

rinsing the substrate in methanol,

drying the substrate in an oven at a temperature of about 80° C for at least one hour, and

blowing off the substrate with deionized nitrogen gas;

depositing at least one layer of a parylene polymer on the surface of the polymeric substrate via chemical vapor deposition; and

annealing by heat each deposited layer of the parylene polymer in the presence of a vacuum at an annealing temperature for a time sufficient to increase the degree of parylene crystallization.

9. (original) The method of claim 8, wherein said depositing step comprises depositing a first layer of parylene N on the surface of said substrate and a second layer of parylene C over said first layer of parylene N.

10. (original) The method of claim 8, wherein said depositing step further comprises gradually shifting the deposition of parylene N to parylene C so as to form a graded interlayer of parylene N and parylene C between the first and second layers.

11. (new) A method for depositing a barrier coating on a clean elastomeric surface, the method comprising the steps of:

exposing the surface to parylene N in vapor phase to form a first layer of parylene N polymer;

shifting the exposure of said parylene N to parylene C in vapor phase upon reaching a desired thickness of the first layer to form a graded layer comprising a transitional mixture of parylene N and parylene C; and

exposing the graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on said graded layer.

12. (new) The method of claim 11, further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum; and maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of parylene crystallization and to improve the adherence capability of the parylene layers to the elastomeric surface.

13. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer, the second parylene polymer being parylene C; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

14. (new) The method of claim 13 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

15. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer,

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being parylene C and also being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

16. (new) The method of claim 15 wherein said transition layer is a graded layer of said first and second parylene polymers.

17. (new) The method of claim 15 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

18. (new) The method of claim 15 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

19. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate, the first parylene polymer being parylene N;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

20. (new) The method of claim 19 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

21. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, the first parylene polymer being parylene N;

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

22. (new) The method of claim 21 wherein said transition layer is a graded layer of said first and second parylene polymers.

23. (new) The method of claim 21 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

24. (new) The method of claim 21 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

## REMARKS/ARGUMENTS

### A. Summary of the Amendment

This is a full and timely response to the non-final Office Action dated August 7, 2006. Reexamination and reconsideration are courteously requested. By way of the present amendment, previously presented claims 14 and 18 are canceled, and claims 15 to 26 are consequently renumbered as claims 14 to 24 since all amendments during reissue are made with respect to the issued patent.

Basis for the amendment may be found in the specification as filed. The only substantive change to the previously-pending claims is found in claims 13 and 15 (formerly claim 16), which upon entry of the amendment recite that the second parylene polymer is parylene C and also is a different parylene polymer than the first parylene polymer. These features are respectively incorporated from now canceled claims 14 and 18. Regarding newly-added claims 19 and 21, the only difference between these claims and previously-pending claims 1 and 11, respectively, is the recitation that the first parylene polymer is parylene N, and that the first parylene polymer is different than the second parylene polymer. Basis for these amendments is found at least at col. 4, lines 33 to 37. Newly added dependent claims 20, and 22 to 24 recite features previously recited in other claims (i.e. claims 14, 16, and 18).

### B. Defective Oath/Declaration

The Oath/Declaration filed with this Reissue Application is allegedly defective for not stating that all errors being corrected in this application arose without any deceptive intent on the part of Applicant. Further, claims 1 to 20 are rejected as being based on a defective reissue oath. An executed substitute Oath/Declaration is filed herewith, including all appropriate language for compliance with 37 C.F.R. § 1.175.



One of the inventors, Mr. Gary A. West, is deceased. The Oath/Declaration is therefore accompanied by a Supplemental Sheet, indicating that Mr. West's legal representative is signing on Mr. West's behalf.

Another of the inventors, Mr. Ronald F. Welch, is unreachable. The Oath/Declaration is therefore accompanied by a Petition under 37 C.F.R. § 1.47 including proof of pertinent facts relating to efforts to contact Mr. Welch.

C. Information Disclosure Statement (IDS)

It is acknowledged that the only cited reference, U.S. Patent No. 6,140,456 (Lee), on the IDS citation sheet filed 3/3/2005 is cited by the Examiner in the Office Action and the PTO-892 form attached thereto. Thus, it is not believed to be necessary for Applicant to resubmit the 3/3/2005 IDS.

D. Allowable Subject Matter

The examiner has acknowledged that claims 8 to 10 are directed to allowable subject matter. Applicants thank the Examiner for a thorough examination of these claims.

E. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 16 to 20 (renumbered herein as claims 15 to 18) are rejected as being indefinite for lack of antecedent basis for the term "said graded layer." The present amendment overcomes this rejection by changing the term "graded" to "transition."

F. Rejections Under 35 U.S.C. § 102(b)

Claims 16 to 17 are rejected as being anticipated by Lee. These rejections are respectfully traversed. By way of the present amendment, claim 16 (and claim 17 by way of its dependency from claim 16) is amended to recite a method for depositing a barrier coating on a surface to protect an underlying *elastic polymeric* substrate. According to the method, a surface of the elastic polymeric substrate is exposed to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, and then a subsequent transition layer and a third layer of a second parylene polymer are formed over the first parylene polymer in order to further protect the elastic polymeric substrate. In contrast, Lee is directed to building thin films on semiconductor substrates such as SiO<sub>2</sub>. Nowhere does Lee teach or suggest that parylene polymers, and particularly the multi-layered parylene polymers of the present invention, could or should be formed on elastic polymeric substrates for their protection. For at least this reason, the rejections under 35 U.S.C. § 102(b) should be withdrawn.

G. Rejections Under 35 U.S.C. § 103(a)

Claims 1 to 7, and 11 to 20 are rejected as being unpatentable over U.S. Patent No. 5879808 (Wary) in view of U.S. Patent No. 5075174 (Pyle), JP 04-173848 (JP-848) and Lee. These rejections are respectfully traversed.

Regarding claims 1 to 7, independent claim 1 recites depositing a first layer of parylene N on a clean surface portion of a polymeric substrate, and then depositing a second layer of parylene C over the first layer. In the Office Action, it is conceded that Wary, Pyle, and JP-848 fail to teach or suggest depositing a plurality of different parylene materials in a layered fashion. For this purpose, Lee is cited for disclosing a method by which different parylene materials are deposited in layers (col. 22, line 60 to col. 23, line 17). However, nowhere in Lee is there any discussion of depositing parylene N directly on a clean polymer substrate surface, and then depositing parylene C over the parylene N.

In view of the deficiency of Lee to disclose the deposition of specific parylene materials in the particular order recited in claim 1, a person of skill in the pertinent art would not be motivated to reach the present invention absent some complementary teaching from what is known in the art. However, Pyle is the only cited reference that makes any mention of different types of parylene materials such as parylene N and parylene C (col. 2, lines 24 to 49). Yet like Lee, Pyle fails to discuss any usefulness produced from using any of these particular parylene materials in any particular layered fashion. Pyle does not disclose any particular usefulness for any one class of parylene materials (N, D, or C) over another class of parylene materials. Indeed, none of the other prior art references provide motivation for selecting parylene N as a substrate-contacting layer, or for selecting parylene C as an outer layer. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit a first layer of parylene N on a clean surface portion of a polymeric substrate, and then deposit a second layer of parylene C over the first layer. For at least this reason, the rejection of claims 1 to 7 should be withdrawn.

Regarding claims 11 to 12, independent claim 11 recites exposing a surface to parylene N in vapor phase to form a first layer of parylene N polymer, shifting the exposure of the parylene N to parylene C in vapor phase to form a graded layer comprising a transitional mixture of parylene N and parylene C, and then exposing the graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on the graded layer. As previously discussed, none of the cited prior art teaches or suggests using any of these particular parylene materials in any particular layered fashion. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit the parylene N and C layers and graded layer as recited in claim 11. For at least this reason, the rejection of claims 11 to 12 should be withdrawn.

Regarding claims 13 to 26, each of independent claims 13 and 16 recites that parylene C is selected as a second or outer layer, and each of independent claims 21 and 23 recites that parylene N is selected as a first or inner layer formed directly on a substrate. The reason for this deposition order is because, as taught in the present specification, the present inventors discovered that parylene N has particularly high bonding properties, and parylene C has

particularly high chemical resistance properties. As previously discussed, nowhere in the cited prior art is there any teaching or suggestion that would motivate a person of ordinary skill in the art to select parylene N over other parylenes as an inner bonding layer, or to select parylene C over other parylenes as an outer layer for chemical resistance. For at least these reasons, the rejections of claims 13 to 20 should be withdrawn, and newly added claims 21 to 26 should be allowed.

#### H. Conclusion

In view of Applicant's amendments and remarks, it is respectfully submitted that Examiner's objections and rejections have been overcome. Accordingly, Applicants respectfully submit that the application is now in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants attorneys at the below-listed telephone number.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: March 6, 2007

By: /DAVID K. BENSON/  
David K. Benson  
Reg. No. 42,314  
(480) 385-5060

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

---

Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

---

**PETITION UNDER 37 C.F.R. §1.47**

BOX AMENDMENT  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Commissioner:

In accordance with the provisions of 37 C.F.R. 1.47(a), applicant Robert J. Saccomanno, through his attorney, hereby petitions to file the above identified application without the Declaration of joint inventor Mr. Ronald F. Welch on account of Mr. Welch's unavailability to execute a Declaration in the application.

A Declaration setting out the pertinent facts in accordance with the provision of Rule 1.47(a) and the petition fee of \$200.00 set forth in 37 C.F.R. 1.17(g) are enclosed herewith.

As set forth in the enclosed declarations, diligent attempts were made to contact the named inventor and ex-employee of Honeywell International Inc., Mr. Ronald F. Welch, concerning this application. Mr. Welch has neither responded to communications nor returned a signed declaration.

Mr. Welch's last known address, as set forth on the declaration, is  
1544 W. Avenue H-11  
Lancaster, CA 93534

A Declaration of Mr. David K. Benson, who has first-hand knowledge of the diligent efforts and failure to obtain the Declaration of joint inventor Ronald F. Welch, are submitted herewith.

Favorable consideration of the present petition is respectfully requested.

Respectfully submitted,  
INGRASSIA FISHER & LORENZ

Dated: March 6, 2007

/DAVID K. BENSON/

David K. Benson  
Reg. No. 42,314

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

---

Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

---

**DECLARATION OF DAVID K. BENSON**

I, David K. Benson, declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1000 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and of any patent issuing therefrom.

1) I am an attorney for the law firm of Ingrassia, Fisher & Lorenz, 7150 E. Camelback Road, Suite 325, Scottsdale, Arizona 85251 ("IF&L") which acts as outside counsel for client Honeywell International Inc. of Morristown, NJ ("Honeywell"). Part of my responsibility is to work with our patent paralegals to obtain signatures of Honeywell inventors on declarations in Honeywell's patent applications prepared by IF&L.

2) I learned that Ronald F. Welch, Jr. is no longer an employee and I was copied on, and then participated in, a string of email messages (attached hereto as Appendix I) sent between November 10, 2006 and February 22, 2007 to and from co-inventor Robert Saccomanno, Honeywell counsel Kurt Luther, and Honeywell Paralegal Jenny Larsen regarding efforts to obtain Mr. Welch's current mailing address in order to obtain Mr. Welch's signature for a combined Declaration and Power of Attorney for a Substitute Reissue Oath/Declaration and Power of Attorney by Inventors.

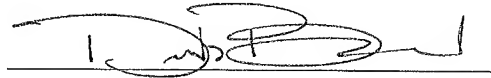
3) Upon learning that Mr. Welch's newest address is not known, and being of the understanding that Mr. Welch had relocated to California upon leaving employment at Honeywell, I performed a telephone search of the name "Ron Welch" using the website

<http://people.yahoo.com>, and obtained a listing of telephone numbers (attached hereto as Appendix II). I called all the telephone numbers that might belong to Mr. Welch, but was unable to reach Mr. Welch by telephone or learn of his whereabouts.

4) On February 22, 2007, I sent a package containing a copy of the combined Declaration and Power of Attorney papers to Mr. Welch to his last known address: 1544 W. Ave H-11, Lancaster, CA 93554 USA via Federal Express. The package was returned to me at IF&L on February 27, 2007 indicating that delivery attempts were made, but the package was unclaimed (see package return information attached hereto as Appendix III).

5) I am left to conclude that joint inventor Mr. Welch is unavailable to sign the combined Declaration and Power of Attorney for a Substitute Reissue Oath/Declaration and Power of Attorney by Inventors.

Date: March 5, 2007

A handwritten signature in black ink, appearing to read 'David K. Benson', written over a horizontal line.

David K. Benson



APPENDIX I 1/4

**David Benson**

---

**From:** David Benson  
**Sent:** Thursday, February 22, 2007 10:47 AM  
**To:** 'Luther, Kurt'  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
We are sending by certified mail the substitute oath/declarations to the inventors' last known addresses, so we can make a showing under 1.47 that we have diligently attempted to obtain their signatures. I hope that this is not a sensitive issue for the family of Gary West, as he has probably passed away. If a representative from his family does contact us, we will try to work with that person to get a signature on the oath/declaration.  
Thank you,  
David

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

480-385-5060 (work)  
480-385-5061 (fax)

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---

**From:** Luther, Kurt [mailto:Kurt.Luther@honeywell.com]  
**Sent:** Friday, February 02, 2007 2:00 PM  
**To:** David Benson; Larsen, Jenny (NM75)  
**Subject:** RE: 246-99-029RE 1246

David - we have not had any luck in finding new contact info. Please proceed with the 1.47.

Thanks,  
Kurt

---

**From:** David Benson [mailto:dbenson@ifllaw.com]  
**Sent:** Friday, February 02, 2007 11:15 AM  
**To:** Luther, Kurt; Larsen, Jenny (NM75)  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
Have you had any luck locating Ron Welch? If not, we should get the 1/47 affidavits for Ron Welch and Gary West prepared and filed as soon as possible.  
Best regards,  
David

2/22/2007

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

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---

**From:** David Benson  
**Sent:** Tuesday, January 02, 2007 2:49 PM  
**To:** 'Luther, Kurt'  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
If we need to proceed under section 1.47 after making reasonable efforts to contact Ron Welch, I agree that we should do so. I will wait to find out if you have any other contact information for him.  
Thank you,  
David

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

480-385-5060 (work)  
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---

**From:** Luther, Kurt [mailto:Kurt.Luther@honeywell.com]  
**Sent:** Tuesday, January 02, 2007 8:59 AM  
**To:** David Benson  
**Subject:** RE: 246-99-029RE 1246

David - I will check with our HR department to see if we have any new information. If not, can we proceed under 37 CFR 1.47 for the reissue declaration?

Thanks,  
Kurt

---

**From:** David Benson [mailto:dbenson@ifllaw.com]  
**Sent:** Thursday, December 28, 2006 3:22 PM

2/22/2007

APPENDIX I 3/4

**To:** Larsen, Jenny (NM75); Luther, Kurt  
**Subject:** RE: 246-99-029RE 1246

Kurt,

We have tried to reach Ron Welch, but have not had any success. His address on the original Declaration is in Horseheads, NY, although from our file it appears a more recent address for Mr. Welch was 1544 W. Ave H-11, Lancaster, CA 93534. It appears that Mr. Welch is not at either of these addresses any longer. If you have any forwarding information for Mr. Welch, will you please let us know so we can forward the reissue declaration to him for signature?

Thank you,  
David

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

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---

**From:** Cheryl Cantore  
**Sent:** Friday, November 10, 2006 2:08 PM  
**To:** David Benson  
**Subject:** FW: 246-99-029RE 1246

FYI

---

**From:** Larsen, Jenny (NM75) [mailto:jenny.larsen@honeywell.com]  
**Sent:** Friday, November 10, 2006 12:21 PM  
**To:** Luther, Kurt; Saccomanno, Robert J.  
**Cc:** Cheryl Cantore  
**Subject:** RE: 246-99-029RE 1246

Unfortunately I sent a letter to Mr. West's last know address yesterday...I seemed to recall an inventor had passed away but was unable to locate any kind of email from Jim to confirm who it was so that I would trouble the family with a fex ex letter.

---

**From:** Luther, Kurt  
**Sent:** Friday, November 10, 2006 11:45 AM  
**To:** Saccomanno, Robert J.; Larsen, Jenny (NM75)  
**Cc:** 'ccantore@ifllaw.com'  
**Subject:** RE: 246-99-029RE 1246

Bob - Yes, please sign and return to Cheryl.

Cheryl - please note Bob's comments below and let us know if you have not been able to contact Ron Welch.

2/22/2007

Thanks,  
Kurt

---

**From:** Saccomanno, Robert J.  
**Sent:** Friday, November 10, 2006 10:50 AM  
**To:** Larsen, Jenny (NM75)  
**Cc:** Luther, Kurt; ccantore@ifllaw.com  
**Subject:** 246-99-029RE 1246

Jenny,

I received your FED-Ex'ed letter a few minutes ago

I believe one of the inventors, Gary West, died a year-or-so ago (according to Jim Falk, who tried to track him down several months ago).  
I am unsure where Ron Welch is now; last I heard I he was applying for a gov't job at Edwards AFB in California.

Should I still sign ?

Bob

2/22/2007

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city

state **California**[Yahoo! Search](#)SPONSOR RESULTS BY INTELIOUS ([What's this?](#))

- **Ron Welch - New Phone Number, Address and Address History Available.** Find Any Unlisted Number and Address with Age, Date of Birth, and Family Members. Search by Maiden name, Spouse Name, Phone Number or Social Security Number.  
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Name	ADVERTISEMENT	Address	Phone
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	La Mesa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(619) 670-6176
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Spring Valley, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(619) 670-6176
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<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	7727 Caminito Monarca Carlsbad, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(760) 753-8773
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	32434 Crown Valley Pkwy Dana Point, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(949) 481-7058
<a href="#">Ron A Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	12355 Sunnyside Way Groveland, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(209) 962-6396
<a href="#">Ronald Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Redlands, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(909) 335-7379
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Napa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(707) 257-1425
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Napa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(707) 257-1425
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Newbury Park, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(805) 499-6276

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Ron

Last Name Welch

State CA

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<a href="#">Ronald J Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	539 N Mentor Ave Pasadena, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(626) 405-1406
<a href="#">Ronald R Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	1044 Fleetwood Dr San Jose, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(408) 268-5502

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- ☐ Recipient's address on your shipment was incorrect and/or incomplete and we were unable to obtain the correct address.
- ☐ A Post Office box number was the only address given or obtainable.
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  - Express Saver
  - Economy 2-Day
  - Priority Overnight

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From: Origin ID: SCFA (480)385-5060

David K. Benson  
INGRASSIA FISHER & LORENZ, P.C.  
7150 E CAMELBACK RD  
SUITE 325  
SCOTTSDALE, AZ 85251



BILL SENDER

SHIP TO: (480)385-5060  
Ronald F. Welch, Jr.

1544 W. Ave H-11

Lancaster, CA 93554

CLSR12/22/23

Ship Date: 22FEB07

ActWgt: 1 LB  
System#: 53106721NET2600  
Account#: S \*\*\*\*\*

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APPENDIX III

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117465 M-0025 01/01 WGS



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REISSUE APPLICATION:	246-99-029RE 1246
ORIGINAL U.S. PATENT NO.:	6,586,048
GRANTED:	July 1, 2003
PATENTEES:	Ronald F. Welch, Jr. Robert J. Saccomanno Gary A. West
TITLE OF PATENT:	Method for Depositing a Barrier Coating on a Polymeric Substrate and Composition Comprising Said Barrier Coating

**SUBSTITUTE REISSUE OATH/DECLARATION AND POWER OF ATTORNEY BY  
INVENTORS**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names.

We believe we are the original, first and sole inventors of the subject matter which is described and claimed in original U.S. patent 6,586,948, granted July 1, 2003, and in the accompanying Reissue Application and for which invention we solicit a reissue patent.

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a). In compliance with this duty there is attached hereto an Information Disclosure Statement.

**STATEMENT OF INOPERATIVENESS OR INVALIDITY  
OF ORIGINAL PATENT  
37 C.F.R 1.175**

We believe the original patent (U.S. patent 6,586,048) to be partly inoperative because the patent claims embrace less than we had a right to claim, by being too narrow in at least some respects and thus erroneously fail to protect all important aspects of the invention disclosed in patent 6,586,048.

We recently became aware of this error when companion applications were being reviewed with respect to prosecution both before the US Patent and Trademark Office and before the International Examining Authority (PCT). Specifically, this error arose in our unduly limiting our method Invention to specific types of parylene polymers. All errors being corrected in the reissue application, up to the filing of this oath or declaration, arose without any deceptive intention on our part.

We understand that the new claims in this reissue application are broadened in certain aspects to correct such inoperativeness, while maintaining the original claims without change so as to obtain the scope of the new broadened claims while retaining the scope of the original claims

We hereby declare that all statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issued thereon.

We hereby appoint all practitioners associated with Customer Number 00128 and Mr. James W. Falk, Reg. 16,154, as our attorneys to prosecute the application identified above and to transact all business in the United States Patent and Trademark Office connected herewith.

It is respectfully requested that all written communications from the Patent and Trademark Office in connection with this application be addressed to

Honeywell International Inc.  
Law Dept. AB1  
P. O. Box 2245  
Morristown, New Jersey 07962

Full name of first joint inventor: **Ronald F. Welch, Jr.**

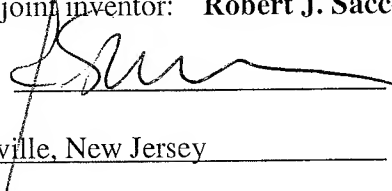
Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Oakridge \_\_\_\_\_ Citizenship: U.S. \_\_\_\_\_

Post Office Address: 558 Gardner Road \_\_\_\_\_

\_\_\_\_\_ Horseheads, New York 14845-1860 \_\_\_\_\_

Full name of second joint inventor: **Robert J. Saccomanno**

Inventor's signature:  \_\_\_\_\_ Date: 10-NOV-06 \_\_\_\_\_

Residence: Montville, New Jersey \_\_\_\_\_ Citizenship: U.S. \_\_\_\_\_

Post Office Address: 22 Glenwood Drive \_\_\_\_\_

\_\_\_\_\_ Montville, New Jersey 07045 \_\_\_\_\_

Full name of third joint inventor: **Gary A. West**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: \_\_\_\_\_ Citizenship: U.S. \_\_\_\_\_

Post Office Address: 336 Brownsdale Road \_\_\_\_\_

\_\_\_\_\_ Butler, Pennsylvania 16002-0424 \_\_\_\_\_

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REISSUE APPLICATION:	246-99-029RE 1246
ORIGINAL U.S. PATENT NO.:	6,586,048
GRANTED:	July 1, 2003
PATENTEES:	Ronald F. Welch, Jr. Robert J. Saccomanno Gary A. West
TITLE OF PATENT:	Method for Depositing a Barrier Coating on a Polymeric Substrate and Composition Comprising Said Barrier Coating

**SUBSTITUTE REISSUE OATH/DECLARATION AND POWER OF ATTORNEY BY  
INVENTORS**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names.

We believe we are the original, first and sole inventors of the subject matter which is described and claimed in original U.S. patent 6,586,948, granted July 1, 2003, and in the accompanying Reissue Application and for which invention we solicit a reissue patent.

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a). In compliance with this duty there is attached hereto an Information Disclosure Statement.

**STATEMENT OF INOPERATIVENESS OR INVALIDITY  
OF ORIGINAL PATENT  
37 C.F.R 1.175**

We believe the original patent (U.S. patent 6,586,048) to be partly inoperative because the patent claims embrace less than we had a right to claim, by being too narrow in at least some respects and thus erroneously fail to protect all important aspects of the invention disclosed in patent 6,586,048.

We recently became aware of this error when companion applications were being reviewed with respect to prosecution both before the US Patent and Trademark Office and before the International Examining Authority (PCT). Specifically, this error arose in our unduly limiting our method Invention to specific types of parylene polymers. All errors being corrected in the reissue application, up to the filing of this oath or declaration, arose without any deceptive intention on our part.

We understand that the new claims in this reissue application are broadened in certain aspects to correct such inoperativeness, while maintaining the original claims without change so as to obtain the scope of the new broadened claims while retaining the scope of the original claims

We hereby declare that all statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issued thereon.

We hereby appoint all practitioners associated with Customer Number 00128 and Mr. James W. Falk, Reg. 16,154, as our attorneys to prosecute the application identified above and to transact all business in the United States Patent and Trademark Office connected herewith.

It is respectfully requested that all written communications from the Patent and Trademark Office in connection with this application be addressed to

Honeywell International Inc.  
Law Dept. AB1  
P. O. Box 2245  
Morristown, New Jersey 07962

Full name of first joint inventor: **Ronald F. Welch, Jr.**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Lancaster, California Citizenship: U.S.

Post Office Address: 1544 W. Avenue H-11

Lancaster, California 93534

Full name of second joint inventor: **Robert J. Saccomanno**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Montville, New Jersey Citizenship: U.S.

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Montville, New Jersey 07045

Full name of third joint inventor: **Gary A. West**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Butler, Pennsylvania Citizenship: U.S.

Post Office Address: 336 Brownsdale Road

Butler, Pennsylvania 16002-0424

# DECLARATION Supplemental Sheet

## For Legal Representatives (35 U.S.C. 117) On Behalf of A Deceased or Incapacitated Inventor

Enter Deceased or Incapacitated Inventor's Name Gary A. WestPage        of       

Name of Legal Representative:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Rita		West	
Legal Representative's Signature <i>Rita West (executrix of Estate)</i>		Date <i>3-2-07</i>	
Residence: City	Valencia	State	PA Country US Citizenship US
Mailing Address 440 Browns Hill Road			
Mailing Address			
City	Valencia	State	PA Zip 6059 Country US
Name of Additional Legal Representative, if any:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Legal Representative's Signature			
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country
Name of Additional Legal Representative, if any:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Legal Representative's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 117 and 37 CFR 1.42, 1.43, 1.63 and 1.64(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

## **EXHIBIT G**



## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	1696946
<b>Application Number:</b>	10754921
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	7604
<b>Title of Invention:</b>	Method for depositing a barrier coating on a polymeric substrate and composition comprising said barrier coating
<b>First Named Inventor/Applicant Name:</b>	Ronald F. Welch
<b>Correspondence Address:</b>	James W Falk Honeywell International Inc Law Dept AB1 PO Box 2245 Morristown NJ 07962 US 201-393-2065 -
<b>Filer:</b>	David K. Benson/Cheryl Cantore
<b>Filer Authorized By:</b>	David K. Benson
<b>Attorney Docket Number:</b>	246-99-029RE 1246
<b>Receipt Date:</b>	19-APR-2007
<b>Filing Date:</b>	09-JAN-2004
<b>Time Stamp:</b>	13:56:07
<b>Application Type:</b>	Utility

### Payment information:

Submitted with Payment	no
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### File Listing:

5/12/07

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		24699029RE_Response_041907.pdf	1140308	yes	30
	<b>Multipart Description/PDF files in .zip description</b>				
	<b>Document Description</b>		<b>Start</b>	<b>End</b>	
	Amendment - After Non-Final Rejection		1	1	
	Claims		2	8	
	Applicant Arguments/Remarks Made in an Amendment		9	13	
	Oath or Declaration filed		14	15	
	Examination support document		16	23	
	Oath or Declaration filed		24	30	

**Warnings:**

**Information:**

**Total Files Size (in bytes):**

1140308

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

## Saved Applications for Later Submission

A submission has not been filed officially at the USPTO until the e-filer executes the Confirm & Submit function and the documents are received at the USPTO Eastern Time. The Acknowledgement Receipt is evidence of this submission.

EFS ID 1696946  
 Saved Date 19-APR-2007 13:51:28  
 Title of Invention Method for depositing a barrier coating on a polymeric substrate and composition comprising said barrier coating  
 First Named Inventor Ronald F. Welch  
 Customer Number or Correspondence Address James W Falk  
 Honeywell International Inc  
 Law Dept AB1  
 PO Box 2245  
 Morristown  
 NJ 07962 US  
 201-393-2065  
 Filed By David K. Benson/Cheryl Cantore  
 Attorney Docket Number 246-99-029RE 1246  
 Application Type Utility

## The following documents have been saved for later submission.

Files to be Submitted	Page Count	Document Description	File Size	Validation Status Message
24699029RE_Response_041907.pdf	30		1140308 byte	PASS
Document Description Page Start Page End				
		Amendment - After Non-Final Rejection	1	1
		Claims	2	8
		Applicant Arguments/Remarks Made in an Amendment	9	13
		Oath or Declaration filed	14	15
		Examination support document	16	23
		Oath or Declaration filed	24	30

Documents will be saved for your convenience until midnight Eastern Time on 26-APR-2007 and then will be deleted.

If you need help:

- Call the Patent Electronic Business Center at (866) 217-9197 (toll free) or e-mail [EBC@uspto.gov](mailto:EBC@uspto.gov) for specific questions about Patent e-Filing.
- Send general questions about USPTO programs to the [USPTO Contact Center \(UCC\)](#).
- If you experience technical difficulties or problems with this application, please report them via e-mail to [Electronic Business Support](#) or call 1 800-786-9199.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

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**RESPONSE AND AMENDMENT PURSUANT TO 37 C.F.R. § 1.111**

BOX AMENDMENT  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the non-final Office Action mailed on August 7, 2006 (and further responsive to the Notice of Non-compliant Amendment mailed on March 19, 2007), please amend the above-identified application as set forth below.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.

Amendments to the Claims:

1. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

depositing a first layer of parylene N on a clean surface portion of the polymeric substrate;

depositing a second layer of parylene C over said first layer; and

annealing by heat each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the parylene C layer on the substrate and its barrier properties.

2. (original) The method of claim 1, wherein the annealing temperature is from about 80 to 220° C and the time period is from about 12 to 100 hours.

3. (original) The method of claim 2, wherein the annealing temperature is about 120 ° C and the time period is about 48 hours.

4. (original) The method of claim 1, wherein the first layer of parylene N has a thickness in the range of from about 0.0001" to 0.0005", and the second layer of parylene C has a thickness in the range from about 0.0002" to 0.002".

5. (original) The method of claim 4, wherein the first layer of parylene N is about 0.00002" thick and the second layer of parylene C is about 0.0005" thick.

6. (original) The method of claim 1, further comprising the step of shifting gradually the deposition of parylene N to parylene C on the substrate to form a graded interlayer of parylene N and parylene C between the first and second layers.

7. (original) The method of claim 6, wherein the graded interlayer includes a thickness in the range of from about 0.00005" to 0.0005".

8. (original) A method for depositing a barrier coating on a polymeric substrate, the method comprising the steps of:

treating a surface portion of the polymeric substrate to remove any contaminants, said treating step comprising:

cleaning ultrasonically the substrate in a solution of detergent,

rinsing the substrate in deionized water,

rinsing the substrate in methanol,

drying the substrate in an oven at a temperature of about 80° C for at least one hour, and

blowing off the substrate with deionized nitrogen gas;

depositing at least one layer of a parylene polymer on the surface of the polymeric substrate via chemical vapor deposition; and

annealing by heat each deposited layer of the parylene polymer in the presence of a vacuum at an annealing temperature for a time sufficient to increase the degree of parylene crystallization.

9. (original) The method of claim 8, wherein said depositing step comprises depositing a first layer of parylene N on the surface of said substrate and a second layer of parylene C over said first layer of parylene N.

10. (original) The method of claim 8, wherein said depositing step further comprises gradually shifting the deposition of parylene N to parylene C so as to form a graded interlayer of parylene N and parylene C between the first and second layers.

11. (amended) A method for depositing a barrier coating on a clean elastomeric surface, the method comprising the steps of:

exposing the surface to parylene N in vapor phase to form a first layer of parylene N polymer;

shifting the exposure of said parylene N to parylene C in vapor phase upon reaching a desired thickness of the first layer to form a graded layer comprising a transitional mixture of parylene N and parylene C; and

exposing the [elastomeric surface] graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on said graded [interlayer] layer.

12. (original) The method of claim 11, further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum; and

maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of parylene crystallization and to improve the adherence capability of the parylene layers to the elastomeric surface.

13. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer, the second parylene polymer being parylene C; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

14. (canceled).

15. (new) The method of claim 13 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.



16. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer,

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer comprising a mixture of said first and said second parylene polymers, said second parylene polymer being parylene C and also being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

17. (new) The method of claim 16 wherein said transition layer is a graded layer of said first and second parylene polymers.

18. (canceled).

19. (new) The method of claim 16 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

20. (new) The method of claim 16 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature

on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

21. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

depositing a first layer of a first parylene polymer on a clean surface portion of the substrate, the first parylene polymer being parylene N;

depositing a second layer of a second parylene polymer different from said first parylene polymer over said first layer; and

annealing by heating each layer in the presence of a vacuum or an inert atmosphere at an annealing temperature and for a time sufficient to increase the degree of parylene crystallization and to improve the adherence of the first parylene layer on the substrate and its barrier properties.

22. (new) The method of claim 21 further comprising forming an adhesion promoting layer on the surface prior to depositing said first layer thereon.

23. (new) A method for depositing a barrier coating on a surface to protect an underlying substrate, the method comprising the steps of:

exposing the surface to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, the first parylene polymer being parylene N;

shifting the exposure of said first parylene polymer to a second parylene polymer in vapor phase upon reaching a desired thickness of said first layer to form a transition layer

comprising a mixture of said first and said second parylene polymers, said second parylene polymer being a different parylene polymer than said first parylene polymer, and

exposing said transition layer to said second parylene polymer in vapor form in the absence of said first parylene polymer to form a third layer of said second parylene polymer on said transition layer.

24. (new) The method of claim 23 wherein said transition layer is a graded layer of said first and second parylene polymers.

25. (new) The method of claim 23 further comprising forming an adhesion promoting layer on the surface prior to exposing the surface to said first parylene polymer.

26. (new) The method of claim 23 further comprising heating the resulting layers of parylene polymers to a temperature sufficient for annealing the parylene polymers in the presence of a vacuum or an inert atmosphere including maintaining the annealing temperature on the parylene polymer layers for a sufficient annealing time period to increase the degree of a parylene crystallization and to improve the adherence of the parylene layers to the surface.

## REMARKS/ARGUMENTS

### A. Summary of the Amendment

This is a full and timely response to the non-final Office Action dated August 7, 2006. Reexamination and reconsideration are courteously requested. By way of the present amendment, previously presented claims 14 and 18 are canceled.

Basis for the amendment may be found in the specification as filed. The only substantive change to the previously-pending claims is found in claims 13 and 16, which upon entry of the amendment individually recite that the second parylene polymer is parylene C and also is a different parylene polymer than the first parylene polymer. These features are respectively incorporated from now canceled claims 14 and 18. Regarding newly-added claims 21 and 23, the only difference between these claims and previously-pending claims 1 and 11, respectively, is the recitation that the first parylene polymer is parylene N, and that the first parylene polymer is different than the second parylene polymer. Basis for these amendments is found at least at col. 4, lines 33 to 37. Newly added dependent claims 22, and 24 to 26 recite features previously recited in other previously-presented claims.

### B. Defective Oath/Declaration

The Oath/Declaration filed with this Reissue Application is allegedly defective for not stating that all errors being corrected in this application arose without any deceptive intent on the part of Applicant. Further, claims 1 to 20 are rejected as being based on a defective reissue oath. An executed substitute Oath/Declaration is filed herewith, including all appropriate language for compliance with 37 C.F.R. § 1.175.

One of the inventors, Mr. Gary A. West, is deceased. The Oath/Declaration is therefore accompanied by a Supplemental Sheet, indicating that Mr. West's legal representative is signing on Mr. West's behalf.

Another of the inventors, Mr. Ronald F. Welch, is unreachable. The Oath/Declaration is therefore accompanied by a Petition under 37 C.F.R. § 1.47 including proof of pertinent facts relating to efforts to contact Mr. Welch.

C. Information Disclosure Statement (IDS)

It is acknowledged that the only cited reference, U.S. Patent No. 6,140,456 (Lee), on the IDS citation sheet filed 3/3/2005 is cited by the Examiner in the Office Action and the PTO-892 form attached thereto. Thus, it is not believed to be necessary for Applicant to resubmit the 3/3/2005 IDS.

D. Allowable Subject Matter

The examiner has acknowledged that claims 8 to 10 are directed to allowable subject matter. Applicants thank the Examiner for a through examination of these claims.

E. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 16 to 20 (renumbered herein as claims 15 to 18) are rejected as being indefinite for lack of antecedent basis for the term "said graded layer." The present amendment overcomes this rejection by changing the term "graded" to "transition."

F. Rejections Under 35 U.S.C. § 102(b)

Claims 16 to 17 are rejected as being anticipated by Lee. These rejections are respectfully traversed. By way of the present amendment, claim 16 (and claim 17 by way of its dependency from claim 16) is amended to recite a method for depositing a barrier coating on a surface to protect an underlying *elastic polymeric* substrate. According to the method, a surface

of the elastic polymeric substrate is exposed to a first parylene polymer in vapor phase to form a first layer of said first parylene polymer, and then a subsequent transition layer and a third layer of a second parylene polymer are formed over the first parylene polymer in order to further protect the elastic polymeric substrate. In contrast, Lee is directed to building thin films on semiconductor substrates such as SiO<sub>2</sub>. Nowhere does Lee teach or suggest that parylene polymers, and particularly the multi-layered parylene polymers of the present invention, could or should be formed on elastic polymeric substrates for their protection. For at least this reason, the rejections under 35 U.S.C. § 102(b) should be withdrawn.

G. Rejections Under 35 U.S.C. § 103(a)

Claims 1 to 7, and 11 to 20 are rejected as being unpatentable over U.S. Patent No. 5879808 (Wary) in view of U.S. Patent No. 5075174 (Pyle), JP 04-173848 (JP-848) and Lee. These rejections are respectfully traversed.

Regarding claims 1 to 7, independent claim 1 recites depositing a first layer of parylene N on a clean surface portion of a polymeric substrate, and then depositing a second layer of parylene C over the first layer. In the Office Action, it is conceded that Wary, Pyle, and JP-848 fail to teach or suggest depositing a plurality of different parylene materials in a layered fashion. For this purpose, Lee is cited for disclosing a method by which different parylene materials are deposited in layers (col. 22, line 60 to col. 23, line 17). However, nowhere in Lee is there any discussion of depositing parylene N directly on a clean polymer substrate surface, and then depositing parylene C over the parylene N.

In view of the deficiency of Lee to disclose the deposition of specific parylene materials in the particular order recited in claim 1, a person of skill in the pertinent art would not be motivated to reach the present invention absent some complementary teaching from what is known in the art. However, Pyle is the only cited reference that makes any mention of different types of parylene materials such as parylene N and parylene C (col. 2, lines 24 to 49). Yet like Lee, Pyle fails to discuss any usefulness produced from using any of these particular parylene materials in any particular layered fashion. Pyle does not disclose any particular usefulness for

any one class of parylene materials (N, D, or C) over another class of parylene materials. Indeed, none of the other prior art references provide motivation for selecting parylene N as a substrate-contacting layer, or for selecting parylene C as an outer layer. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit a first layer of parylene N on a clean surface portion of a polymeric substrate, and then deposit a second layer of parylene C over the first layer. For at least this reason, the rejection of claims 1 to 7 should be withdrawn.

Regarding claims 11 to 12, independent claim 11 recites exposing a surface to parylene N in vapor phase to form a first layer of parylene N polymer, shifting the exposure of the parylene N to parylene C in vapor phase to form a graded layer comprising a transitional mixture of parylene N and parylene C, and then exposing the graded layer to parylene C in vapor form in the absence of parylene N to form a third layer of parylene C polymer on the graded layer. As previously discussed, none of the cited prior art teaches or suggests using any of these particular parylene materials in any particular layered fashion. It is therefore clear that nowhere in the cited prior art is there sufficient motivation for a person of skill in the art to deposit the parylene N and C layers and graded layer as recited in claim 11. For at least this reason, the rejection of claims 11 to 12 should be withdrawn.

Regarding claims 13 to 26, each of independent claims 13 and 16 recites that parylene C is selected as a second or outer layer, and each of independent claims 21 and 23 recites that parylene N is selected as a first or inner layer formed directly on a substrate. The reason for this deposition order is because, as taught in the present specification, the present inventors discovered that parylene N has particularly high bonding properties, and parylene C has particularly high chemical resistance properties. As previously discussed, nowhere in the cited prior art is there any teaching or suggestion that would motivate a person of ordinary skill in the art to select parylene N over other parylenes as an inner bonding layer, or to select parylene C over other parylenes as an outer layer for chemical resistance. For at least these reasons, the rejections of claims 13 to 20 should be withdrawn, and newly added claims 21 to 26 should be allowed.

H. Conclusion

In view of Applicant's amendments and remarks, it is respectfully submitted that Examiner's objections and rejections have been overcome. Accordingly, Applicants respectfully submit that the application is now in condition for allowance, and such allowance is therefore earnestly requested. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the Applicants attorneys at the below-listed telephone number.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: April 19, 2007

By: /DAVID K. BENSON/  
David K. Benson  
Reg. No. 42,314  
(480) 385-5060



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Appl. No.	:	10/754,921	Confirmation No. 7604
Applicant	:	Ronald F. WELCH et al.	
Filed	:	January 9, 2004	
Art Unit	:	1762	
Examiner	:	D.P. Turocy	
Docket No.	:	246-99-029RE 1246	

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**DECLARATION OF DAVID K. BENSON**

I, David K. Benson, declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1000 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application and of any patent issuing therefrom.

1) I am an attorney for the law firm of Ingrassia, Fisher & Lorenz, 7150 E. Camelback Road, Suite 325, Scottsdale, Arizona 85251 ("IF&L") which acts as outside counsel for client Honeywell International Inc. of Morristown, NJ ("Honeywell"). Part of my responsibility is to work with our patent paralegals to obtain signatures of Honeywell inventors on declarations in Honeywell's patent applications prepared by IF&L.

2) I learned that Ronald F. Welch, Jr. is no longer an employee and I was copied on, and then participated in, a string of email messages (attached hereto as Appendix I) sent between November 10, 2006 and February 22, 2007 to and from co-inventor Robert Saccomanno, Honeywell counsel Kurt Luther, and Honeywell Paralegal Jenny Larsen regarding efforts to obtain Mr. Welch's current mailing address in order to obtain Mr. Welch's signature for a combined Declaration and Power of Attorney for a Substitute Reissue Oath/Declaration and Power of Attorney by Inventors.

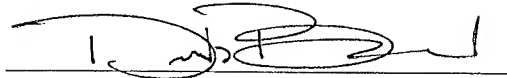
3) Upon learning that Mr. Welch's newest address is not known, and being of the understanding that Mr. Welch had relocated to California upon leaving employment at Honeywell, I performed a telephone search of the name "Ron Welch" using the website

<http://people.yahoo.com>, and obtained a listing of telephone numbers (attached hereto as Appendix II). I called all the telephone numbers that might belong to Mr. Welch, but was unable to reach Mr. Welch by telephone or learn of his whereabouts.

4) On February 22, 2007, I sent a package containing a copy of the combined Declaration and Power of Attorney papers to Mr. Welch to his last known address: 1544 W. Ave H-11, Lancaster, CA 93554 USA via Federal Express. The package was returned to me at IF&L on February 27, 2007 indicating that delivery attempts were made, but the package was unclaimed (see package return information attached hereto as Appendix III).

5) I am left to conclude that joint inventor Mr. Welch is unavailable to sign the combined Declaration and Power of Attorney for a Substitute Reissue Oath/Declaration and Power of Attorney by Inventors.

Date: March 5, 2007

A handwritten signature in black ink, appearing to read 'D. K. Benson', is written over a horizontal line.

David K. Benson

David Benson

---

**From:** David Benson  
**Sent:** Thursday, February 22, 2007 10:47 AM  
**To:** 'Luther, Kurt'  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
 We are sending by certified mail the substitute oath/declarations to the inventors' last known addresses, so we can make a showing under 1.47 that we have diligently attempted to obtain their signatures. I hope that this is not a sensitive issue for the family of Gary West, as he has probably passed away. If a representative from his family does contact us, we will try to work with that person to get a signature on the oath/declaration.  
 Thank you,  
 David

David K. Benson  
 Registered Patent Attorney  
 Ingrassia, Fisher & Lorenz PC  
 7150 E. Camelback Road  
 Suite 325  
 Scottsdale, AZ 85251

480-385-5060 (work)  
 480-385-5061 (fax)

The information in this message is attorney client privileged, attorney work product and/or confidential and is intended only for the use of the individual(s) named above. This message should not be forwarded without permission from the author. If this message is received in error or otherwise by someone other than the addressee, please contact the author at the above number and return the message or destroy it. Thank you.

---

**From:** Luther, Kurt [mailto:Kurt.Luther@honeywell.com]  
**Sent:** Friday, February 02, 2007 2:00 PM  
**To:** David Benson; Larsen, Jenny (NM75)  
**Subject:** RE: 246-99-029RE 1246

David - we have not had any luck in finding new contact info. Please proceed with the 1.47.

Thanks,  
 Kurt

---

**From:** David Benson [mailto:dbenson@ifllaw.com]  
**Sent:** Friday, February 02, 2007 11:15 AM  
**To:** Luther, Kurt; Larsen, Jenny (NM75)  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
 Have you had any luck locating Ron Welch? If not, we should get the 1/47 affidavits for Ron Welch and Gary West prepared and filed as soon as possible.  
 Best regards,  
 David

2/22/2007

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

480-385-5060 (work)  
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---

**From:** David Benson  
**Sent:** Tuesday, January 02, 2007 2:49 PM  
**To:** 'Luther, Kurt'  
**Subject:** RE: 246-99-029RE 1246

Kurt,  
If we need to proceed under section 1.47 after making reasonable efforts to contact Ron Welch, I agree that we should do so. I will wait to find out if you have any other contact information for him.  
Thank you,  
David

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

480-385-5060 (work)  
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---

**From:** Luther, Kurt [mailto:Kurt.Luther@honeywell.com]  
**Sent:** Tuesday, January 02, 2007 8:59 AM  
**To:** David Benson  
**Subject:** RE: 246-99-029RE 1246

David - I will check with our HR department to see if we have any new information. If not, can we proceed under 37 CFR 1.47 for the reissue declaration?

Thanks,  
Kurt

---

**From:** David Benson [mailto:dbenson@ifllaw.com]  
**Sent:** Thursday, December 28, 2006 3:22 PM

2/22/2007

APPENDIX I 3/4

**To:** Larsen, Jenny (NM75); Luther, Kurt  
**Subject:** RE: 246-99-029RE 1246

Kurt,

We have tried to reach Ron Welch, but have not had any success. His address on the original Declaration is in Horseheads, NY, although from our file it appears a more recent address for Mr. Welch was 1544 W. Ave H-11, Lancaster, CA 93534. It appears that Mr. Welch is not at either of these addresses any longer. If you have any forwarding information for Mr. Welch, will you please let us know so we can forward the reissue declaration to him for signature?

Thank you,  
David

David K. Benson  
Registered Patent Attorney  
Ingrassia, Fisher & Lorenz PC  
7150 E. Camelback Road  
Suite 325  
Scottsdale, AZ 85251

480-385-5060 (work)  
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---

**From:** Cheryl Cantore  
**Sent:** Friday, November 10, 2006 2:08 PM  
**To:** David Benson  
**Subject:** FW: 246-99-029RE 1246

FYI

---

**From:** Larsen, Jenny (NM75) [mailto:jenny.larsen@honeywell.com]  
**Sent:** Friday, November 10, 2006 12:21 PM  
**To:** Luther, Kurt; Saccomanno, Robert J.  
**Cc:** Cheryl Cantore  
**Subject:** RE: 246-99-029RE 1246

Unfortunately I sent a letter to Mr. West's last know address yesterday...I seemed to recall an inventor had passed away but was unable to locate any kind of email from Jim to confirm who it was so that I would trouble the family with a fex ex letter.

---

**From:** Luther, Kurt  
**Sent:** Friday, November 10, 2006 11:45 AM  
**To:** Saccomanno, Robert J.; Larsen, Jenny (NM75)  
**Cc:** 'ccantore@ifllaw.com'  
**Subject:** RE: 246-99-029RE 1246

Bob - Yes, please sign and return to Cheryl.

Cheryl - please note Bob's comments below and let us know if you have not been able to contact Ron Welch.

2/22/2007

Thanks,  
Kurt

---

**From:** Saccomanno, Robert J.  
**Sent:** Friday, November 10, 2006 10:50 AM  
**To:** Larsen, Jenny (NM75)  
**Cc:** Luther, Kurt; ccantore@ifllaw.com  
**Subject:** 246-99-029RE 1246

Jenny,

I received your FED-Ex'ed letter a few minutes ago.

I believe one of the inventors, Gary West, died a year-or-so ago (according to Jim Falk, who tried to track him down several months ago).

I am unsure where Ron Welch is now; last I heard I he was applying for a gov't job at Edwards AFB in California.

Should I still sign ?

Bob

2/22/2007

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- **Ron Welch - New Phone Number, Address and Address History Available.** Find Any Unlisted Number and Address with Age, Date of Birth, and Family Members. Search by Maiden name, Spouse Name, Phone Number or Social Security Number.  
[www.intelius.com](http://www.intelius.com)

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Name	ADVERTISEMENT	Address	Phone
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	La Mesa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(619) 670-6176
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Spring Valley, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(619) 670-6176
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Spring Valley, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(619) 670-6176
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	7727 Caminito Monarca Carlsbad, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(760) 753-8773
<a href="#">Ron Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	32434 Crown Valley Pkwy Dana Point, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(949) 481-7058
<a href="#">Ron A Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	12355 Sunnyside Way Groveland, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(209) 962-6396
<a href="#">Ronald Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Redlands, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(909) 335-7379
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Napa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(707) 257-1425
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Napa, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(707) 257-1425
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Newbury Park, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(805) 499-6276

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First Name  Last Name  State

Search the Web: Ron Welch, California

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- **Ron Welch - New Phone Number, Address and Address History Available.** Find Any Unlisted Number and Address with Age, Date of Birth, and Family Members. Search by Maiden name, Spouse Name, Phone Number or Social Security Number.  
[www.intelius.com](http://www.intelius.com)

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Name	ADVERTISEMENT	Address	Phone
<a href="#">Ronald E Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	Newbury Park, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(805) 499-6276
<a href="#">Ronald J Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	539 N Mentor Ave Pasadena, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(626) 405-1406
<a href="#">Ronald R Welch</a>	<a href="#">More Information</a> <a href="#">Background Check</a>	1044 Fleetwood Dr San Jose, CA <a href="#">Add to Address Book</a> , <a href="#">Map</a>	(408) 268-5502

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- ☐ Recipient's address on your shipment was incorrect and/or incomplete and we were unable to obtain the correct address.
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David K. Benson  
INGRASSIA FISHER & LORENZ, P.C.  
7150 E CAMELBACK RD  
SUITE 325  
SCOTTSDALE, AZ 85251



BILL SENDER

SHIP TO: (480)385-5060  
Ronald F. Welch, Jr.

1544 W. Ave H-11

Lancaster, CA 93554



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System#: 5310672/NET72600  
Account#: S \*\*\*\*\*  
Delivery Address Bar Code

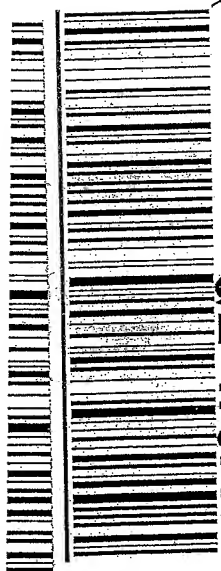
Ref # 002.2163R  
Invoice #  
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APPENDIX III

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REISSUE APPLICATION:	246-99-029RE 1246
ORIGINAL U.S. PATENT NO.:	6,586,048
GRANTED:	July 1, 2003
PATENTEES:	Ronald F. Welch, Jr. Robert J. Saccomanno Gary A. West
TITLE OF PATENT:	Method for Depositing a Barrier Coating on a Polymeric Substrate and Composition Comprising Said Barrier Coating

**SUBSTITUTE REISSUE OATH/DECLARATION AND POWER OF ATTORNEY BY  
INVENTORS**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenship are as stated below next to our names.

We believe we are the original, first and sole inventors of the subject matter which is described and claimed in original U.S. patent 6,586,948, granted July 1, 2003, and in the accompanying Reissue Application and for which invention we solicit a reissue patent.

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

We hereby state that we have reviewed and understand the contents of the above-identified specification, including the claims.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, 1.56(a). In compliance with this duty there is attached hereto an Information Disclosure Statement.

STATEMENT OF INOPERATIVENESS OR INVALIDITY  
OF ORIGINAL PATENT  
37 C.F.R 1.175

We believe the original patent (U.S. patent 6,586,048) to be partly inoperative because the patent claims embrace less than we had a right to claim, by being too narrow in at least some respects and thus erroneously fail to protect all important aspects of the invention disclosed in patent 6,586,048.

We recently became aware of this error when companion applications were being reviewed with respect to prosecution both before the US Patent and Trademark Office and before the International Examining Authority (PCT). Specifically, this error arose in our unduly limiting our method Invention to specific types of parylene polymers. All errors being corrected in the reissue application, up to the filing of this oath or declaration, arose without any deceptive intention on our part.

We understand that the new claims in this reissue application are broadened in certain aspects to correct such inoperativeness, while maintaining the original claims without change so as to obtain the scope of the new broadened claims while retaining the scope of the original claims

We hereby declare that all statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issued thereon.

We hereby appoint all practitioners associated with Customer Number 00128 and Mr. James W. Falk, Reg. 16,154, as our attorneys to prosecute the application identified above and to transact all business in the United States Patent and Trademark Office connected herewith.

It is respectfully requested that all written communications from the Patent and Trademark Office in connection with this application be addressed to

Honeywell International Inc.  
Law Dept. AB1  
P. O. Box 2245  
Morristown, New Jersey 07962

Full name of first joint inventor: **Ronald F. Welch, Jr.**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Oakridge Citizenship: U.S.

Post Office Address: 558 Gardner Road

Horseheads, New York 14845-1860

Full name of second joint inventor: **Robert J. Saccomanno**

Inventor's signature:  Date: 10-Nov-06

Residence: Montville, New Jersey Citizenship: U.S.

Post Office Address: 22 Glenwood Drive

Montville, New Jersey 07045

Full name of third joint inventor: **Gary A. West**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: \_\_\_\_\_ Citizenship: U.S.

Post Office Address: 336 Brownsdale Road

Butler, Pennsylvania 16002-0424

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

REISSUE APPLICATION:	246-99-029RE 1246
ORIGINAL U.S. PATENT NO.:	6,586,048
GRANTED:	July 1, 2003
PATENTEES:	Ronald F. Welch, Jr. Robert J. Saccomanno Gary A. West
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STATEMENT OF INOPERATIVENESS OR INVALIDITY  
OF ORIGINAL PATENT  
37 C.F.R 1.175

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It is respectfully requested that all written communications from the Patent and Trademark Office in connection with this application be addressed to

Honeywell International Inc.  
Law Dept. AB1  
P. O. Box 2245  
Morristown, New Jersey 07962

Full name of first joint inventor: **Ronald F. Welch, Jr.**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Lancaster, California Citizenship: U.S.

Post Office Address: 1544 W. Avenue H-11

Lancaster, California 93534

Full name of second joint inventor: **Robert J. Saccomanno**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Montville, New Jersey Citizenship: U.S.

Post Office Address: 22 Glenwood Drive

Montville, New Jersey 07045

Full name of third joint inventor: **Gary A. West**

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Residence: Butler, Pennsylvania Citizenship: U.S.

Post Office Address: 336 Brownsdale Road

Butler, Pennsylvania 16002-0424



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## DECLARATION Supplemental Sheet

### For Legal Representatives (35 U.S.C. 117) On Behalf of A Deceased or Incapacitated Inventor

Enter Deceased or Incapacitated Inventor's Name Gary A. West Page        of       

Name of Legal Representative:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Rita		West	
Legal Representative's Signature <i>Rita West (executrix of Estate)</i>		Date <u>3-2-07</u>	
Residence: City <u>Valencia</u>	State <u>PA</u>	Country <u>US</u>	Citizenship <u>US</u>
Mailing Address <u>440 Browns Hill Road</u>			
Mailing Address			
City <u>Valencia</u>	State <u>PA</u>	Zip <u>16059</u>	Country <u>US</u>
Name of Additional Legal Representative, if any:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Legal Representative's Signature			
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country
Name of Additional Legal Representative, if any:		<input type="checkbox"/> A petition has been filed for this non-signing legal representative	
Given Name (first and middle (if any))		Family Name or Surname	
Legal Representative's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	Zip	Country

This collection of information is required by 35 U.S.C. 117 and 37 CFR 1.42, 1.43, 1.63 and 1.64(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

## **EXHIBIT H**



UNITED STATES PATENT AND TRADEMARK OFFICE

*K. Luther*  
*A. Hoppenbrouwer*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,921	01/09/2004	Ronald F. Welch JR.	246-99-029RE 1246	7604

James W Falk  
Honeywell International Inc  
Law Dept AB1  
PO Box 2245  
Morristown, NJ 07962

7590 08/14/2007

EXAMINER

TUROCY, DAVID P

ART UNIT PAPER NUMBER

1762

MAIL DATE DELIVERY MODE

08/14/2007

PAPER

*Notice of Abandonment*  
*Due 10/14/07*

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

RECEIVED  
SEP 16 2 50 PM  
CENTRAL RECORDS - MTC

*Boyle*  
*8/20/07*

*2163RE*

**Notice of Abandonment**

Application No.

10/754,921

Examiner

David Turocy

Applicant(s)

WELCH ET AL.

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 07 August 2006.
  - (a) ☒ A reply was received on 06 March 2007 (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on 07 November 2006.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☒ A reply was received on 07 November 2006 but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☐ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$\_\_\_\_\_ is insufficient. A balance of \$\_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$\_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$\_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☒ The reason(s) below:

The oath/dec filed 11/7/06 is unsigned (by applicant's own admission - see Remarks/arguments section B). A signed oath/dec with a petition didn't come in until 3/6/07. 1.135(c) doesn't apply in this situation, as this was a deliberate omission. See MPEP 714.03.

  
**TIMOTHY MEEKS**  
**SUPERVISORY PATENT EXAMINER**

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.